UNIVERSITY OF GONDAR

COLLEGE OF MEDICINE AND HEALTH SCIENCES

INSTITUTE OF PUBLIC HEALTH

DETERMINANTS OF LATE PRESENTATION TO HIV/AIDS CARE AMONG PEOPLE LIVING WITH HIV RECEIVING CARE IN HEALTH INSTITUTIONS OF SOUTHERN TIGRAY ZONE, NORTHERN ETHIOPIA: AN INSTITUTION BASED CASE CONROL STUDY.

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Examiner

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Abrivations and acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
EDHS	Ethiopian Demographic Health Survey
ELPCWG	European Late Presenter Consensus Working Group
EPI INFO	Epidemiological Information
FGD	Focus Group Discussion
FMOH	Federal Minstry OF Health
GDS	Geriatric depression scale
HBTC	House Based Testing and Counseling
HIV	Human Immunodeficiency Virus
IQR	Inter Quartile Range
MSG	Mothers' Support Group
MSH	Management Science for Health
U.S.NIAAA	United States National Institute on Alcohol use and Alcoholism
PCA	Principal Component Analysis
PIHCT	Provider Initiated HIV Counseling and Testing
PLWHA	People Living With HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
VTC	Voluntery Testing and Counseling
WHO	World Health Organization

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Abstract

Introduction: Late diagnosis and presentation to HIV/AIDS care lessens the benefits of antiretroviral therapy and increase risk of HIV/AIDS transmission. A large number of people present late for HIV care despite free accessible HIV care services. The factors hindering patients' early presentation to HIV care when HIV/AIDS care services are accessible in lower health facilities is not known in Ethiopia.

Objectives: This study was conducted to identify determinants of late presentation to HIV/AIDS care among HIV positives enrolled in HIV chronic care in Health institutions in southern zone of Tigray, Northern Ethiopia.

Methods: An Institution based un-matched case-control study, supported with phenomenology was conducted, among HIV positives enrolled in 6 HIV chronic care clinics in Southern Tigray from March to April, 2014.Cases were late presenters_CD4 count <350 cells/µl or WHO stages 3 or 4 and Controls were with CD4 ≥ 350 cells/µl and WHO stages 1 or 2 at first visit. Using 1:2, case: control ratio, 147 cases and 295 controls were included and selected systematically. Multiple logistic regression models were used to identify determinants of late presentation.Qualitative data was analyzed using thematic analysis complementing quantitative findings.

Result: A total of 147 cases and 266 controls participated in the study. In the multiple logistic regression participants aged 25-29 (AOR = 3, CI: 1.2-8.1) and 35-39(AOR = 4.1, CI: 1.4-12.5), having two (AOR = 6,CI: 1.3-28) and more(AOR = 5.2,CI: 1.1-24.8) lifetime sexual partners, with poor social support (AOR = 2.3,CI: 1.26-4.30), in the second wealth quintile(AOR = 3.3,CI:1.3-8.5), who perceived stigma (AOR = 4.4,CI: 2.2-8.3) and losing income(AOR= 6.8 CI: 1.8-24.5) as barrier, reported severe illness(AOR = 4.3,CI: 2.26-8) as reason for care seeking presented late, while those who reported protecting family as reason for care(AOR = .19(.09 - .37), presented in recent years and who disclosed HIV status to partner (AOR = 0.5,CI : 0.24 - 0.95) presented early compared to their counter parts . Use of non-medical care and male sex also deter timely care in the FGD.

Conclusion: In this study, HIV positives of older ages, low socio-economic status and poor social support, denying disclosure and having perception of barriers in recieving HIV care presented late.Efforts towards promoting early care seeking should target these factors in the area and similar settings.

Key words: Late presentation, Determinants, Health center, Case-control, Ethiopia

1. Introduction

1.1. Statement of the problem

More than 35.3 million people are living with HIV globally of which Sub- Saharan Africa accounts for 69% of the global HIV burden[1]. In Ethiopia ,the total number of HIV-positive people was estimated to be over 1.2 million [2].

Due to the availability of Antiretroviral Therapy (ART), contracting HIV is no longer an automatic death sentence. However, late presentation to HIV/AIDS care minimizes the benefit of ART and is deriving the HIV/AIDS epidemic due to uncontrolled viremia and unknown serostatus [3-5]. According to European Late Presenter Consensus Working group (ELPCWG), late presentation is defined as any patient who presents with a CD4 cell count of < 350 cells/mm^3 at first visit to HIV care and presentation with advanced HIV disease is defined as persons presenting for care with a CD4 count below 200 cells/ µl or AIDS-defining event, regardless of the CD4 cell count [6]. Including the developed countries, a substantial numbers of patients continue to present for care only when they have reached an advanced stage of disease [4, 5, 7-12]. Roughly 15–43 % HIV-infected individuals in the developed world, present at clinics for care with advanced HIV disease [3, 13] and 40-60 % of PLHA present with CD4 count of < 350 cells/mm^3 [4, 11]. In resource-limited settings, patients present far later for care [4, 5, 12, 14]. In Sub-Saharan Africa 35 – 65 % present on average with a CD4 cell count of < 200 cells/mm3 or with an AIDS-defining event [9, 13, 15, 16] ; 20_40% start ART with a CD4 of < 100 cells/mm3. Such late presentation is associated with lower survival, early mortality particularly associated with tuberculosis, and invasive bacterial and fungal infections [4]. Although findings on late presentation are limited, the problem of late ART initiation and its poor outcomes was reported by some researches in Ethiopia [7, 17, 18].One study in Arbaminch, Ethiopia indicated that 65 % of patients presented late to HIV care(WHO stage III and IV)[15].

Late presentation has consequences both for the individual in terms of poor out comes and for the society in terms of increased transmission. Late presentation and subsequent late ART initiation is major reason for the high mortality rates observed during the first months of ART[5, 8, 10, 19, 20] and the decreasing retention rates in the course of ART[3, 5, 10, 13, 21]. In addition, late presentation poses a higher cumulative risk of HIV transmission to others [11, 13, 22] and an economic burden to individuals , with higher resource use, particularly in the first few months following presentation [11]. Furthermore, late presentation means that opportunities to reduce onward transmission, either by reducing high-risk behaviors or by reducing an individual's infectivity, are missed.

The determinants of late presentation in the developed world include older age, male sex, risky behaviors (including injection drug, heterosexuality, transgender sex, and alcohol use), lower income, as well as low degree of education [5, 11, 13].As reported from previous studies[3, 5, 13],the reasons for late presentation to HIV care in low income countries, particularly those in sub-Saharan Africa are diverse and include, contextual/structural, clinical and individual level factors. Decentralizing and improving access to HIV/AIDS care has been an onward strategy to promote early presentation to care and timely care initiation in Sub Saharan Africa, including Ethiopia[5, 23].

In Ethiopia, two hospital based studies, reported (demographic, geo-graphic, psychosocial) factors for late presentation [24, 25].However, the determinants of late presentation in such Higher, centralized hospitals may not represent the characteristics of HIV positives who present in the local health center setting.
Thus, determinants of late presentation to HIV/AIDS care when HIV cares services are accessible to lower health service units is not known in Ethiopia at large and specifically in the study area. Apart from this, the effect of social support, use of non - medical care and the individuals' perceived need and perceived barriers to HIV care, were not addressed adequately in previous studies.

1.2. Literature review

1.2.1. Magnitude of late presentation to HIV /AIDS care

Late presentation to HIV / AIDS had been reported from studies globaly[3, 11, 26, 27] and in Sub- Saharan Africa countries[3, 16, 28, 29] although with varying definitions such as CD4 counts (< 100 cells/mm3, < 250 cells/mm3, < 200 cells/mm3 and < 350 cells/mm3) or only using WHO stages[3, 16, 24, 25].Delayed access to HIV care after HIV diagnosis is common even in the developed world. In New York City; the epicenter for HIV in the U.S., HIV treatment has been widely available for more than 15 years. Yet, approximately 26% of people diagnosed with HIV have concomitant diagnosis of AIDS at the time of HIV diagnosis [3]. Studies from Europe report that around 50% of patients present late for care with CD4 count of < 350 cells/mm3 [4] and 31.3 % present with CD4 count <200/mm3[26]. A Meta-analysis of data from 44 studies conducted in high-income countries reported that a mean annual CD4 increase of only1.5 cells/mm3 was achieved at treatment presentation between 1992 and 2011[4]. Thus, in sub-Saharan Africa, a major concern is that the problem of late presentation and late ART initiation will reach a sub-optimal steady state similar to the United States, where, despite substantial investment and near universal availability of HIV-related services, an unprecedented number of people living with HIV (including undiagnosed HIV) and several important service and programmatic gaps continue to drive HIV incidence, and HIV-related morbidity and mortality at the population-level[3].

Studies in sub-Saharan Africa indicate that huge number people delay to HIV care. The low CD4 count at ART initiation, as observed in several studies in sub-Saharan Africa [3, 7, 8, 13, 21], is attributed to the high frequency of late-stage presentation among new HIV-positive patients[3, 5, 13, 16, 19-21, 28, 29].In a study evaluating the role of home based testing for early uptake in Kenya, only 42 % of HIV positives receiving home visits reported HIV care attendance[30].A cross-sectional analysis of initial visits to the Immune Suppression Syndrome Clinic in Uganda, over one-third (40%) were categorized as late presenters, that is WHO disease stage 3 or 4[13].A study in South Africa indicated that, 33.6% of newly-diagnosed with HIV presented with late-stage HIV disease(CD4 count < 100 cells/mm^3)[16].

1.2.2. Determinants of late Presentation to HIV/AIDS care

Literatures emerge with new factors for late presentation to HIV care at different study settings and contexts [13, 16, 24, 25, 30, 31]. In the developed world determinants of late presentation include older age, male sex, risk behaviors (including injection drug ,homosexuality, and alcohol use),lower income, as well as limited knowledge about accessing testing or treatment on testing positive and patients perspective about the impact of a positive result, fears around discrimination, confidentiality, criminalization of risk behaviors[11, 13, 26, 32].

In sub-Saharan Africa determinant factors are diverse and include beyond the individual level determinates measured at the contextual (nationwide or sub-national) and clinic levels [3, 5, 7]. Studies in sub Saharan Africa on the patient level determinants reported various aspects of it and this can be broadly categorized as demographic, socioeconomic, behavioral, psychosocial and social environment determinants[13, 16] and qualitative studies also reported perceived barriers and benefits [23, 31, 33] at patient level. A systematic review from studies in sub Saharan Africa on Risk factors, barriers and facilitators for linkage to antiretroviral therapy care identified key areas of individual level determinants modifiable by interventions as economic, psychosocial, medical and demographic factors [34].

1. Socio-demographic determinants

Various socio-demographic factors found to determine late presentation to HIV care including sex, age, etc. Studies in South Africa [16],Nigeria[35]and India [36] reported an increased likelihood of late presentation with male sex. Lahuerta et al. on Factors Associated with Late Antiretroviral Therapy Initiation among Adults in Mozambique using same definition (stage IV) at ART initiation, reported association of female sex, with less likelihood of late ART initiation[8]. Age was found to determine late presentation to HIV care with some controversies at different settings. A study in Belgium and France found that rates of late testing increase with age, although it reported varying trend for the delayed presentation to care. Patients aged 30-49 years were at increased risk of delayed presentation to care and presentation to care with advanced HIV disease compared to patients aged <30 years, but

patients aged >50 years were not[26]. Older ages were associated with increased odds of late presentation in other studies too;Nigeria[35] Uganda[13]and Germany[37].In contrast, a study in India found an association of younger age with delayed entry in men, but not in women[36]. Younger and older ages (extremes) were also associated with a lower likelihood of late ART initiation in Mozambique [8].

Lower levels of education in Uganda [13], contrarily being educated in Jimma, Ethiopia[25] were associated with late presentation to HIV/AIDS care. In Mozambique, High level education was associated with a lower likelihood of late ART initiation [8] Being married or living in consensual union promotes early presentation to care. In Uganda being unmarried [13],and similarly in Ethiopia being separated or divorced [25] were associated with late presentation. On the other hand, being married or in union, were associated with a lower likelihood of late ART initiation in Mozambique [8].

Having pregnancy promotes early linkage in to HIV care cascade. Being pregnant were associated with early presentation to care in Uganda [13] and early ART initiation in Mozambique. In the Mozambique study; entry into care via PMTCT, year of ART initiation were also associated with a lower likelihood of late ART initiation [8].Rural residence is also associated with delayed care entry, increased mortality [38] and as a barrier to accessing care in South Africa [31]

2. Behavioral determinants

Once individuals are infected with HIV, alcohol use is related to low participation in prevention of mother-to-child transmission (PMTCT), pre-test and posttest counseling (including returning for test results). In addition, there is a late presentation to HIV care in patients who use alcohol heavily, compared with those who do not use alcohol [24, 39, 40].In contrast, study from Uganda reported, heavy alcohol consumption as incentive of lower rate of late HIV stage at presentation, with more non-drinkers presenting late[13].Perceptions of risk for risky behaviors were reported to affect timing of HIV care seeking. In Uganda History of causal/ Sexual partner were associated with early presentation to care Compared to participants with no sexual partners in the past three months [21]. Similarly, a study in Venezuela those

reporting two partners had decreased odds of late diagnosis as compared to having none[41].

3. Socioeconomic determinants

The association between socio-economic status (SES) and engagement in to HIV /AIDS care is not clear. A systematic review on association between various determinants of socio-economic status (income, education, occupation) and adherence to ART in low- and middle-income countries reported no association. This has been explained due to the accuracy of measuring socioeconomic status, using only (income, education, and occupation) brings it in question [42].In single studies, different indicators of SES were found to determine HIV care seeking behavior. Drain, P.K., et al. reported the association of indicators like competing needs to healthcare, non-business occupation (unemployed, farmers and with other occupations) presented late when compared with peoples that had business employment in South Africa [16]. Unemployement were also associated with late presentation in Uganda [13]. Other indicators of SES had been reported to affect presentation to HIV care such as presence and type of household water source (those without piped water presented late versus those with piped water [13] and Food shortage[34] The distance to the clinic and lack of time to care were reported as barriers to care in Africa [16, 31, 34]. In south Africa, participants who lived > 5 kilometers from the test site who worked outside their home and who could not afford medication/transport cost presented late [16] Another study in Uganda also reported more time required to travel to clinic were a determinant of late presentation[13].

4. Social environment determinants

Presence of social support, living arrangement, and HIV status disclosure were reported as social environment of individuals that can affect early presentation to care. Living in a household with others was associated with late presentation to care. In Uganda, persons not reporting living alone presented late [13] A recent case control study in Ethiopia observed that HIV-positive adults who lived with their families, lived in a rented house presenting late to care[24].HIV status disclosure has been reported as determinant of late presentation to care. Lack of spousal HIV status disclosure were associated with late presentation to HIV care[13, 31],while having young children were associated with early presentation to care[13].Similarly, in Uganda having no children under age 5 and no other HIV infected household members were associated with late presentation[13].Among HIV positives identified by home based testing and counseling in Kenya: Having disclosed, living with someone attending HIV care were associated with care attendance[30]. Poor emotional health and Poor social support structures were also reported as important risk factors for delayed HIV testing [16].In other study, Higher social support scores were associated with earlier HIV diagnosis and timely linkage to care [43].

5. **Perceived barriers**

An individual's perception of psychological costs of attending HIV treatment clinics have been mentioned as barrier to early presentation to HIV care. Higher levels of internalized or perceived stigma negatively impact intentions to disclose HIV status and was associated with poor access to care [5, 11, 27, 44] , and A recent systematic review in Sub-Saharan Africa suggests that stigma is and fears of disclosure are important individual level deterrents to early presentation to HIV care [34]. In Ethiopia, HIV-related stigma and low awareness were associated with late presentation to HIV care[24]. Another study in Kilimanjaro, Kenya reported an association of high levels of witnessed and internalized stigma with late care seeking[29]. Fear of drug side effects had also reported to discourage timely care seeking; patients, who perceived ART side effects, presented late to care [24].

Drain, P.K., et al. reported long waiting times (queues) as barriers to receiving care [16].

6. Perceived need

Anticipated or experienced benefits of attending the HIV care often promoted regular clinic attendance. Hope of Improvements in physical well-being was reported as promoter for seeking early care [23]. In contrast, being symptomatic as reason for testing was associated with late HIV care seeking. Patients who tested for HIV as result of sickness/symptoms presented late in Ethiopia [24, 25]. Late stage diagnosis was also associated with receiving care from a non-medical facility [21, 45]. In study conducted in Uganda, Participants who reported ever receiving care in a non-medical setting (home, traditional healer and drug stores) had significantly increased odds of late stage diagnosis, compared to those who had never received care from such providers[21] The same study indicates that, a significant proportion of HIV infected individuals may not make contact with health facilities until late in their illness. Two thirds of the newly diagnosed HIV infected individuals had never attended a medical clinic at all[21]. In Kenya wanting to seek care after diagnosis were associated with care attendance. On contrast residents who reported their current health as excellent or who doubted their home based testing and counseling result were less likely to report care attendance[30]. Having chronic health problems and behavioral problems upon HIV diagnosis were also associated with late presentation in Ethiopia [25].

A study by MacPherson, P., et al. indicated failure of linkage as multi-factorial and negative factors at more than one level frequently interacted, having a multiplicative effect on the risk of drop-out. Poor socio economic status, expense of clinic visits and stigma experienced by patients towards health care providers or neighbors they know can add up to hinder patients not to receive HIV care services[33]. A conceptual framework for the determinants of late presentation to HIV care were adapted from Lahuerta, Ue et al.on analysis of determinates of late ART intention and its upstream milestones (late diagnosis and/or late presentation to HIV care[3].The framework includes determinants, which were found to influence late presentation to HIV/AIDS care from previous literatures.

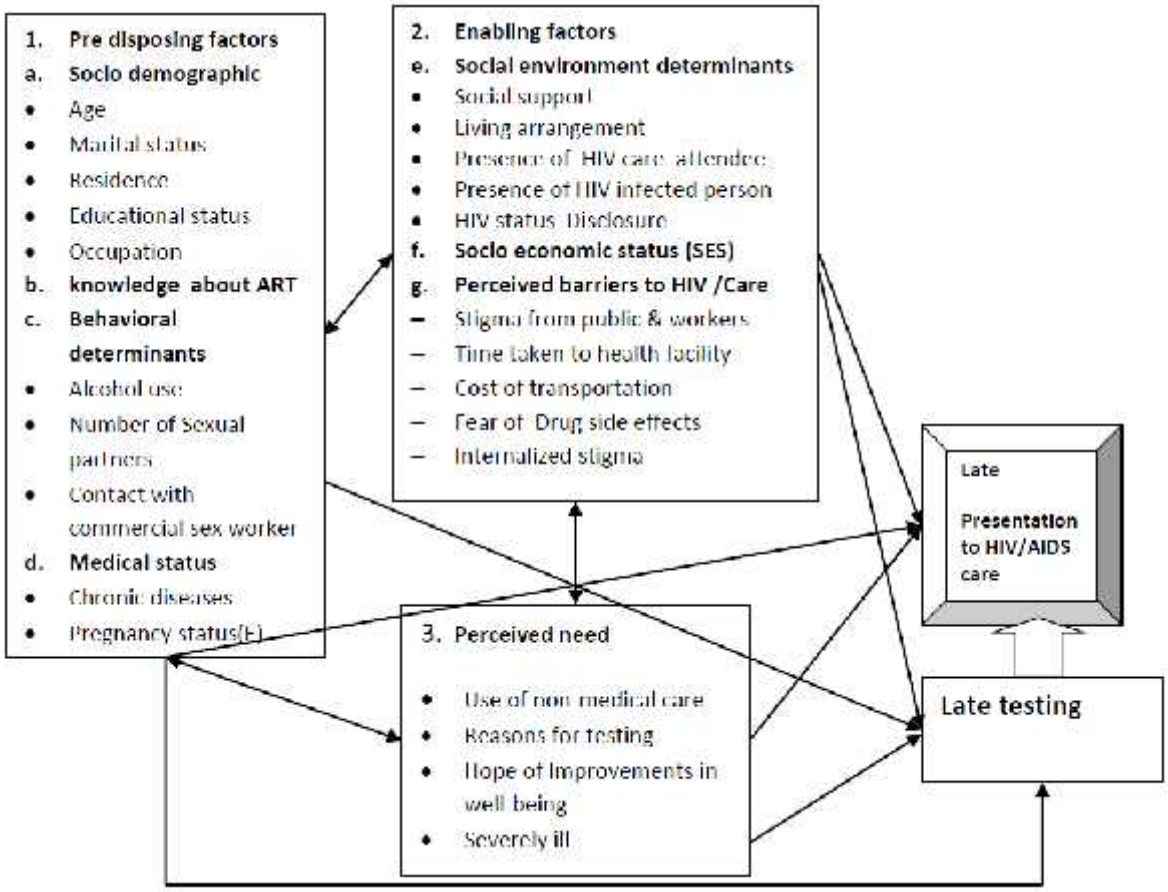


Figure1. Conceptual frame work of determinants of late presentation to HIV /AIDS care (source: Adapted from Lahuerta, M., et al. (2013)

1.3. Justification of the study

In the era of earlier ART initiation policies wich have been a CD4< 350 cell/mm3 yet, and CD4 <500 cell/mm3 currently, and free accessible HIV care services, achieving the goals' of HIV treatment cascade requires, factors hindering early presentation to care are identified and tackled on.

How ever, data on determinants of late presentation when HIV care services are accessible at local health care units is limited in Ethiopia. While late presentation to HIV/AIDS care and its consequent attrition is a problem in the country [7, 15, 17, 18].

Identifying the determinants of late presentation to HIV care may assist in effectively tracking the expanding HIV care services and in designing interventions to overcome barriers to early presentation to HIV care at this level. Given Social support promoting policies in Sub-Saharan Africa, understanding the effect of social support on early presentation to HIV care is timely. In addition, studying the effect of using non –medical care for the late presentation to HIV/AIDS Care, where greater than *80%* of the population uses traditional medicine is Mandatory in Ethiopia.

This study will therefore

- Establish determinants of late presentation or enrollment to HIV /AIDS care at the 'decentralized or accessible' setting in the era of early ART initiation Policies.
- Explore the effect of socioeconomic status, social support, use of non –medical treatment, perceived need of HIV positives on HIV care seeking.

2. Objectoves

2.1. General objective:

- To identify determinants of late presentation to HIV/AIDS care among PLWHA enrolled in HIV chronic care in Health institutions in southern zone of Tigray, Northern Ethiopia.

3. Methods

3.1. Study design and period:

An Institution based un-matched case control study supported with qualitative design was conducted from March 17- April 20, 2014.

3.2. Study area

The study area is southern Tigray Zone_one of the Administrative zones of Tigray region and it has 8 weredas 3 urban and 5 rural respectively, Maychew town is zonal administrative town, located 645 KM north of Adiss Ababa. According to a recent estimate of zonal administration, the total population in zone is 723,708.There are a total 3 General hospitals, 32 health centers and 81 health posts distributed in the 8 weredas. In 2014 there were a total of 20 public health facilities providing ART services. Currently a total of 11626 PLWHA were enrolled to HIV care out of which 8569 on –ART and 3057 Pre -ART care[46].

3.3. Source and Study population

Source population

The source population is all HIV-positive ≥ 18 years old who presented for care at HIV chronic care clinics in the health institutions of southern Tigray zone, Northern Ethiopia.

Study population

All People living with HIV ≥ 18 years of age that were enrolled in HIV chronic care clinics of randomly selected 4 health centers and 2 hospitals and who come for care during the period of data collection.

Study Units

Cases and controls were selected based on ELPCWG case definition for late presentation by considering their base line CD4 count and/or WHO HIV/AIDS stages at initial clinic visit. Cases were PLWHA whose CD4 count is < 350 cell/µl or WHO stage III or IV. Controls were PLWHA whose CD4 count is ≥ 350 cell/µl and WHO stage I or II. For the qualitative data, focus group discussions (FGD) of PLWHA who are a member of Mother's support group (MSG) in Mohoni health center were

conducted. MSGs are group of HIV positive people supported by Management Sciences for Health (MSH) and who provide psycho-social support, adherence counseling, promotion of facility delivery, encouragement of male involvement and family testing, group support, family planning counseling, and promotion of appropriate infant feeding options of HIV positives in the community [47].

3.4. Sample size & sampling procedures

3.4.1. Sample size determination

The sample size was calculated basesd on two population proportion formula using Epi Info version7.From previous similar study, alcohol use, denial of HIV status disclosure to partner and perceived stigma were reported to affect early HIV care seeking[24]. From these denial of HIV status disclosure to partner gives maximum sample size. The following additional assumptions were considered to obtain optimal sample size.

Proportion	46.2% for cases and 29.4 % for controls
Confidence level	95%
Power	90%
Odds ratio	2
Case control ratio	1:2
Sample size	402
Adding 10 % non response	442(147 cases and 295 controls)

3.4.2. Sampling procedures

Four health centers and 2 hospitals were randomly selected (Figure 2). At the end of February 2014, there were a total of 9644 people living with HIV/AIDS, 7190 on- ART and 2454 Pre -ART in these health institutions. Cases and controls were selected using systematic random sampling based on visits during the data collection period after equally allocating the cases and controls to the 6 health institutions. An interval of 5 and 2 were used to select cases and controls respectively. Twelve members of MSG (6 males and 6 females) of PLWHA were included in the focus group discussion (FGD); Participants were selected using purposive sampling; persons who are knowledgeable on the issue and can interact freely to get the necessary information.

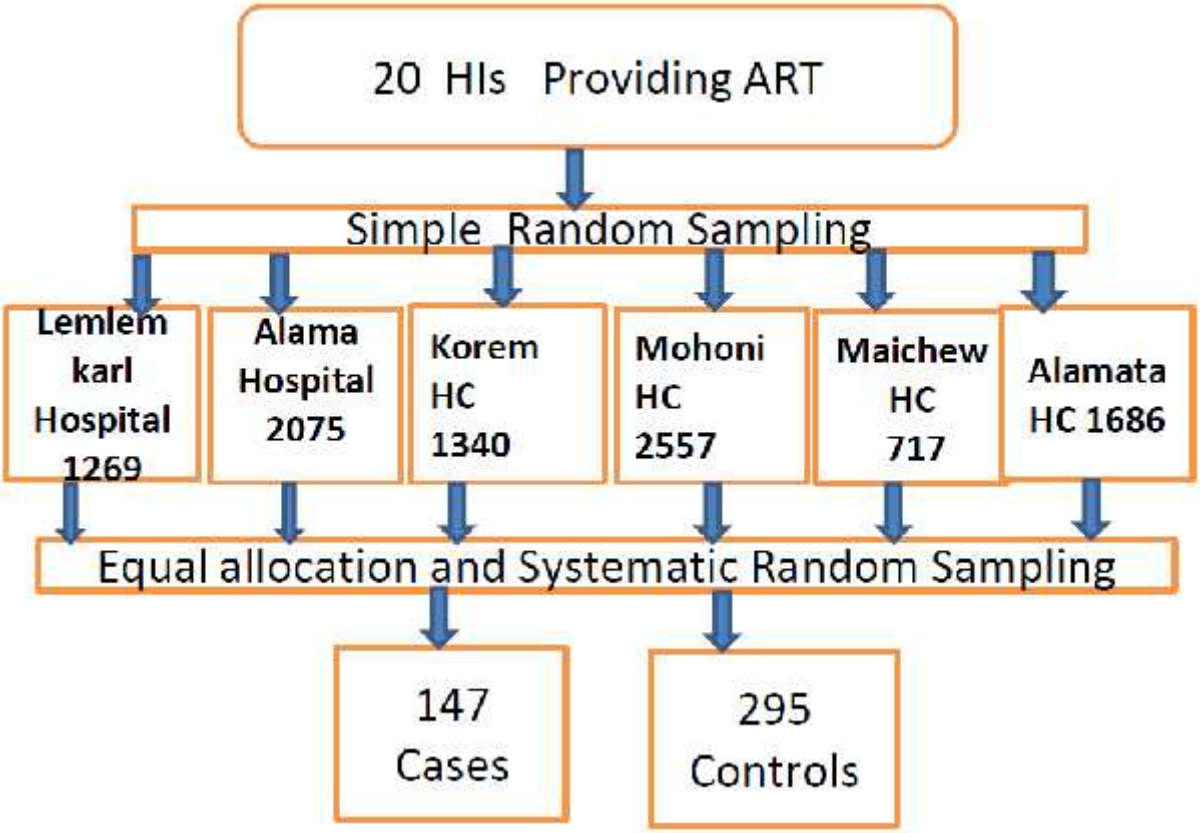


Figure 2: Schematic representation of selection of cases and controls, Southern zone of Tigray, February 2014

3.5. Variables of the study

3.5.1. Dependent variable:

Late presentation to HIV/AIDS care (Case/control)

3.5.2. Independent variables:

3.5.2.1. Predisposing factors

- **Socio Demographic determinants**

  Sex, age, marital status, pregnancy, residence, occupation,

- **Behavioral determinants**

Alcohol use, number of sexual partners, contact with commercial sex worker

- **Knowledge about ART**

3.5.2.2. Enabling factors

- **Social environment determinants**

House hold social support, living arrangements ,presence of HIV care attending person , Presence of HIV infected household member, willingness to HIV status disclosure, number of children age <10 years responsible,

- **Perceived barriers**

  Stigma, fear of drug side effects, cost of transportation,

- **Socioeconomic status(SES)**

3.5.2.3. Perceived need

Receiving care in non-medical setting, reasons for testing on first HIV positive, hope of improvement in well-being and desire to protect family.

3.6. Operational definitions

Late presentation: late presentation is defined as initial presentation to care (i.e. the first clinical visit for HIV care) with CD4 count < 350 cell/mm3 or WHO disease stage III or IV [6].

Early presentation: is defined as initial presentation to care (i.e., the first clinical visit for HIV care) with CD4 count ≥ 350 cell /mm3 and WHO disease stage I and II [6].

Good Knowledge on ART: Knowledge about ART was assessed by asking 5 knowledge questions related to ART derived from related study[48].PLWHA were said to have good knowledge on ART if he/she scored ≥ median, after summing up to composite score.

Wealth quintiles: Socioeconomic status was measured using a wealth index for urban and rural inhabitants separately (having private home, radio, abed with sponge matter and a mobile phone are being common indicators for both). The index was constructed for each household via principal components analysis (PCA).Indicators having greater or equal to 50% rescaled communalities were used to construct wealth index and further categorized in to 5 wealth quintiles (as lowest, second, third, fourth and highest based on the Ethiopian demographic and health survey (EDHS) classification[49].

High witnessed stigma: Assessed using 5 questions on ever encounter of a HIV positive person being stigmatized by society because of his/her HIV positive Status and persons scored ≥ median of the sum score have high witnessed stigma.Scale had a Cronbach's alpha of .63.

High Internalized stigma: Internalized Stigma was measured by using a six-item instrument used to measure internalized stigma [50]. Each item offers a binary (yes/no) response, and the total scale score is computed as the sum of the items. Scale was internally consistent, with its Cronbach's alpha of 0.82.Participants were said to have high level of internalized stigma if they scored equal or above the median value after summing up to composite score otherwise low stigma.

Alcohol use: is referred as drank of alcohol 12 months prior to presenting to care and patients' average daily alcohol use before attending HIV /AIDS care were classified as safe(1-2 drinks/day) ,at risk(3-4 drinks /day) and heavy alcohol use(5-6 drinks /day) based on U.S. National Institute on Alcohol Abuse and Alcoholism (NIAAA) classification.

Poor Social support: Availability of personal social support was assessed by asking 8-item social support scale questions about social support with each response rated on a 5-point Likert scale (ranging from 1 being ''none of the time'' to 5 being ''all of the time''). These questions incorporate two social support scales (emotional and tangible support[51].Participants were said to have poor social support if they scored below the median of composite score.

Perceived barriers: was assessed by recording responses to 13 lists of barriers identified by reviewing related literatures on perceived personal barriers for receiving HIV medical care before initiating care[23, 31, 34, 52].

Perceived need: was assessed by recording responses to 9 lists of reasons for attending HIV care found from qualitative and quantitative studies [3, 31, 53].

Depressed: Level of depression was assessed using four-item Geriatric Depression Scale and categorized as depressed (who scored ≥ 2) otherwise not depressed.

3.7. Inclusion and exclusion criteria

Inclusion criteria: all adult PLWHA ≥18 years of age were included.

Exclusion criteria: HIV positive persons with neither CD4 count data nor WHO HIV/AIDS stage recorded at the first visit to the HIV care clinic and PLWHA who were overtly cognitively impaired were excluded from the study.

3.8. Data collection tools and procedures

People living with HIV/AIDS enrolled in the selected health institutions during the data collection period were selected based on the criteria for the cases and controls after collecting baseline CD4 count and/or WHO staging) using chart reviews. Socio-economic, social environment, behavioral and psychosocial determinants were obtained from 442 eligible subjects through interviews by 11 ART nurses working in

the HIV care clinics,using structured interviewer administered questionnaire. The questionnaire was developed in English after reviewing relevant literatures and has seven parts: Stage at presentation to HIV care (CD4 count and WHO clinical stages), Socio-demographic determinants, socioeconomic status (SES), behavioral determinants, psychosocial determinants social environment determinants and perceived need factors.

Qualitative Data were collected by the principal investigator from one focus group discussion (FGD). FGD were conducted using FGD guide, 2 persons_ one recorder and one facilitator (principal investigator) participated in the data collection.FGD session were conducted parallel to quantitive data collection and elapsed for a total of 45 minutes.

3.9. Data quality control

The questionnaire was developed in English and it was translated into the local language, Tigrigna. The structured questionnaire was pre - tested in 5% of the total sample before the actual data collection in a nearby health center which were not part of the actual study. The data were collected by ART case managers and ART nurses.Data collectors were trained before the actual data collection.Data collection process were supervised by principal investigator and 2 supervisors(Nurses) and completed questionnaires were checked for their consistencies at the end of each date of data of collection.

3.10. Data processing and analysis

Data were entered in to EPIINFO 3.5.4 and then exported in to SPSS 20 for analysis. Data were Cleaned and coded, Descriptive analyses executed using SPSS 20, sum and medians of composite score variables were computed. Bivariate analysis of each independent variable with the outcome variable was conducted and variables with P – value < 0.2 were selected for multiple logistic regression analysis. Backward LR method was used to select independent determinants of late presentation in the multiple logistic regressions. Odds ratio were used to measure the presence and strengths of association and 5% level of significance was used to decide on presence of significant association.Hosmer and Lemeshow's goodness of fit test were used to check fulfillment of necessary assumptions for the final model.Qualitative data were

transcribed, translated and analyzed using thematic analysis under the sub headings of the quantitative findings and new themes for new findings.

4.Ethical consideration

Ethical clearance was obtained from Ethical review board of Institute of public health, University of Gondar. Letter of permission were obtained from Southern Tigray Zonal health Bureau. Permission was sought from the respective health institutions (medical director or persons in charge of institutions), to identify cases and controls through chart review by authorized ART case managers or ART nurses. Informed written consent after building confidentiality was also sought from each participant of the study after their eligibility based on the chart reviews. Informed consent were obtained from each FGD participants including concent for responses to be recorded using audio recorder.

5. Result

5.1. Characteristics of study Participants

5.1.1. Socio-demographic characteristics

A total of 147 cases and 266 controls were participated in this study with a response rate of 100% and 91%, among cases and controls respectively.The median age at time of presentation to HIV/AIDS care of PLHWA interviewed were 30 years with inter quartile range of 11 and 13 for cases and controls respectively (Table1). Females account more both for cases and controls_92 (62.3%) and 180(67.7 %) respectively. Nearly half of the cases (49.9%) and 122(45%) of controls were married at the time of presentation to HIV/AIDS care. Eleven (12.4%) and 29(17%) of female reproductive age (18-49) had pregnancy when they come to HIV care. Professional or business occupation is the highest occupation group among cases 37 (25%) unlike farmer in controls 79(29.7). Only eighteen (12.2%) of cases and 61 (22.9%) of controls were in the highest wealth quintile (Table 1).

Table 1: Socio-demographic characteristics at first presentation of cases and controls, Southern Tigray zone, Northern Ethiopia, 2014

Variables	Categories	Cases N (%)	Controls N (%)
Sex	Male	55(37.4)	86(32.3)
	Female	92(62.6)	180(67.7)
Marital status at first presentation	Married	73(49.7)	122(45.9)
	Widowed	22(14.9)	37(13.9)
	Divorced	34(23.1)	67(25.2)
	Never married	18(12.2)	40(15)
Pregnancy (18-49)	Yes	11(12.4)	29(17)
	No	78(87.6)	141(82.9)
Education at first presentation	Can't read and write	87(59.2)	167(62.8)
	Primary(1-8)	40(27.2)	74(27.8)
	Secondary and above	20(13.6)	25(9.4)
Residence	Urban	93(63.3)	154(57.9)
	Rural	54(36.7)	112(42.1)
Occupation	Farmer	34(23)	79(29.7)
	Professional /Business occ.	37(25)	49(18.4)
	Unemployed	25(17)	45(16.9)
	House wife	27(18.4)	53(19.9)
	Daily laborer	24(16.3)	40(15)
Age category	18-24	19(12.9)	63(23.7)
	25-29	35(23.8)	48(18)
	30-34	36(24.5)	58(21.8)
	35-39	28(19)	32(12)
	40-44	16(10.88)	32(12)
	45+	13(8.8)	33(12.4)
Wealth quintiles(SES)	Lowest	40(27.2)	42(15.8)
	Second	39(20.4)	47(17.7)
	Third	24(16.3)	57(21.4)
	Fourth	26(17.7)	59(22.2)
	Highest	18(12.2)	61(22.9)

5.1.2. Behavioral and Social environment conditions

Sixty six (44.9%) of cases and 126(47.4%) of controls were non drinkers 12 months before coming to HIV care. Sixty one (41%) of cases and 76(28.8%) of controls did not disclosed their HIV status when they present to care. Sixty two (42.2%) of cases and 102(38.3%) of controls have < 10 years old children to look for at the time of presentation to care (Table 2).

Table 2: Social environment and behavioral characteristics at first presentation of cases and controls, Southern Tigray zone, Northern Ethiopia, 2014

Characteristics	Cases N (%)	Controls N (%)
Behavioral Characteristics		
Drinking alcohol		
None users	66(44.9)	126(47.4)
Safe alcohol user	48(32.7)	85(31.9)
At risk alcohol use	29(19.7)	42(15.8)
Heavy alcohol use	4(2.7)	12(4.5)
Category of HIV transmission		
Sexually	128(87)	221(83)
Using sharp needles	9(6)	27(10.2)
Caring to seek relative	7(4.7)	14(5.3)
Mother to child	3(2)	4(1.5)
Sexual Contact with CSW		
Yes	36(65.5)	45(52.3)
No	19(34.5)	41(47.7)
Social environment determinants		
Living Condition /arrangement		
Alone	45(30.6)	92(34.6)
With family	46(31.3)	85(31.9)
With partner	56(38.1)	89(33.5)
Having Children < 10 years old		
Yes	62(42.2)	102(38.3)
No	85(57.8)	164(61.7)
HIV status disclosure*		
Not disclosed	61(41)	76(28.8)
Family member	48(32.7)	108(40.6)
Partner	26(35.6)	72(59)
Neighbors	8(5.4)	21(7.9)
For religious caregiver	6(4)	7(2.6)

Note: * % adds up more than handred % because of more than one response.

5.1.3. Knowledge on ART, reasons for testing and use of non –medical care

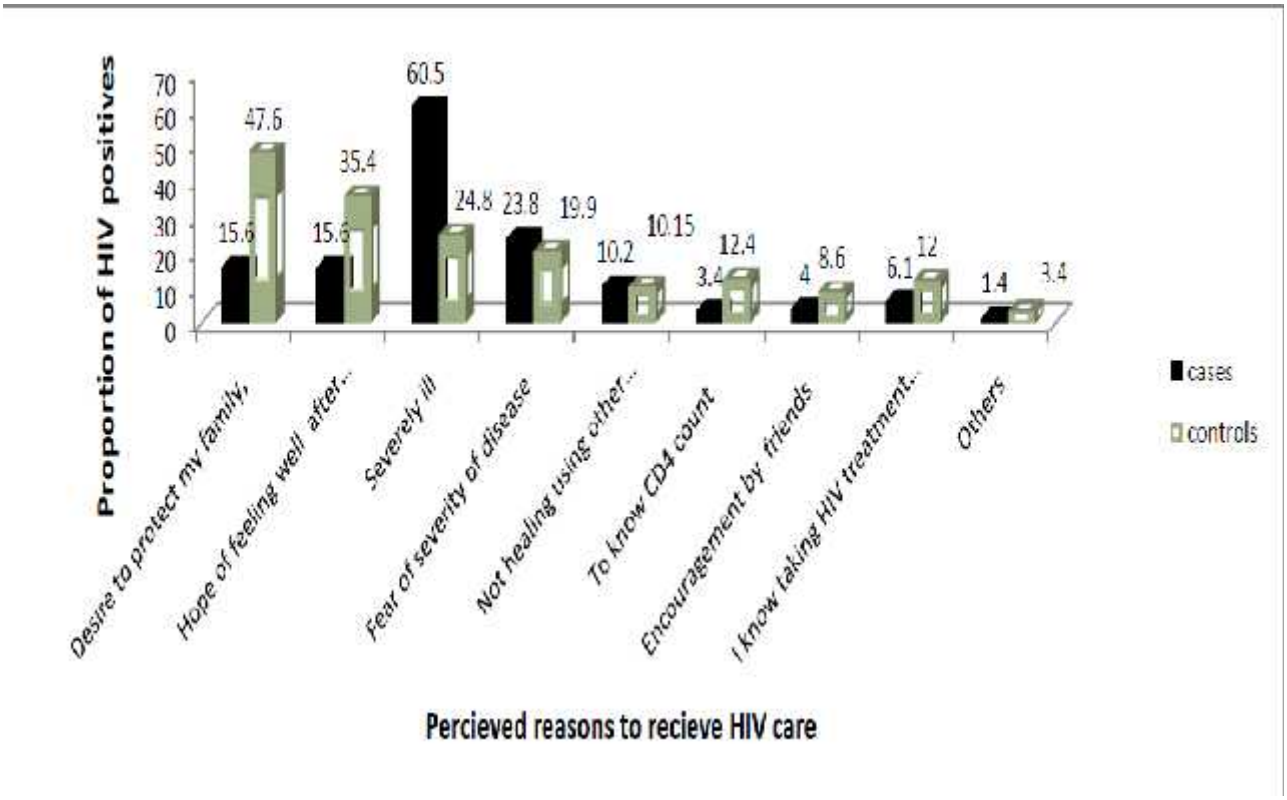
Around twenty six (13.5 %) of cases as compared to 36(17.7 %) of controls haven't heard about ART before coming to HIV care.Sixty(40 %) of cases and 121(45 %) controls were tested positive during their VTC attendance.Seventy two (48.9%) of cases and 187(70.3%) of controls have not use any form of non medical treatment before coming to HIV care. On contrast, a third (31.3%) of cases and 27(10.2%) of the controls used traditional medicines for HIV before coming to care. Nearly all (91.8 %) of cases and a third quarter (74.8 %) of controls have presented to care on the same date of their first positive test (Table 3).

Table 3: Knowledge on ART, reasons for HIV testing on first positive test , types of non – medical care used before coming to care and time delay after testing positive, by cases and controls in Southern Tigray zone, Northern Ethiopia, 2014

Variable	Categories	Cases N (%)	Controls N (%)
Knowledge on ART	Don't heard about ART	26(13.5)	36(17.7)
	Poor knowledge	71(54.4)	142(50)
	Good knowledge	50(33)	88(34)
Reasons for HIV testing when positive	VTC	60(40)	121(45)
	Seeking care for other disease	36(24.5)	63(23.7)
	Fear of risky exposures	26(17.7)	33(2.4)
	PIHCT	16(10.9)	30(11.3)
	PMTCT	8(5.4)	17(6.4)
	After death of spouse	1(0.7)	2(0.75)
Use of non-medical treatment*	None	72 (48.9)	187(70.3)
	Traditional healer	46(31.7)	27(10.2)
	Drug stores	27(18.4)	37(13.9)
	Religious	20(13.6)	21(7.9)
	Home medicines	1(0.7)	3(1.1)
Time delay after testing positive,	The same date	135(91.8)	199(74.8)
	Within 2 years	9(6.1)	32(12)
	After 2 years	3(2)	35(13)

5.1.4. Percieved need and perceived barriers in receiving HIV care

The most frequently responded reason behind receiving HIV care were because of severe illness among cases 126(60.5) and desire to protect family among controls 89(47.6) respectively (Figure3).

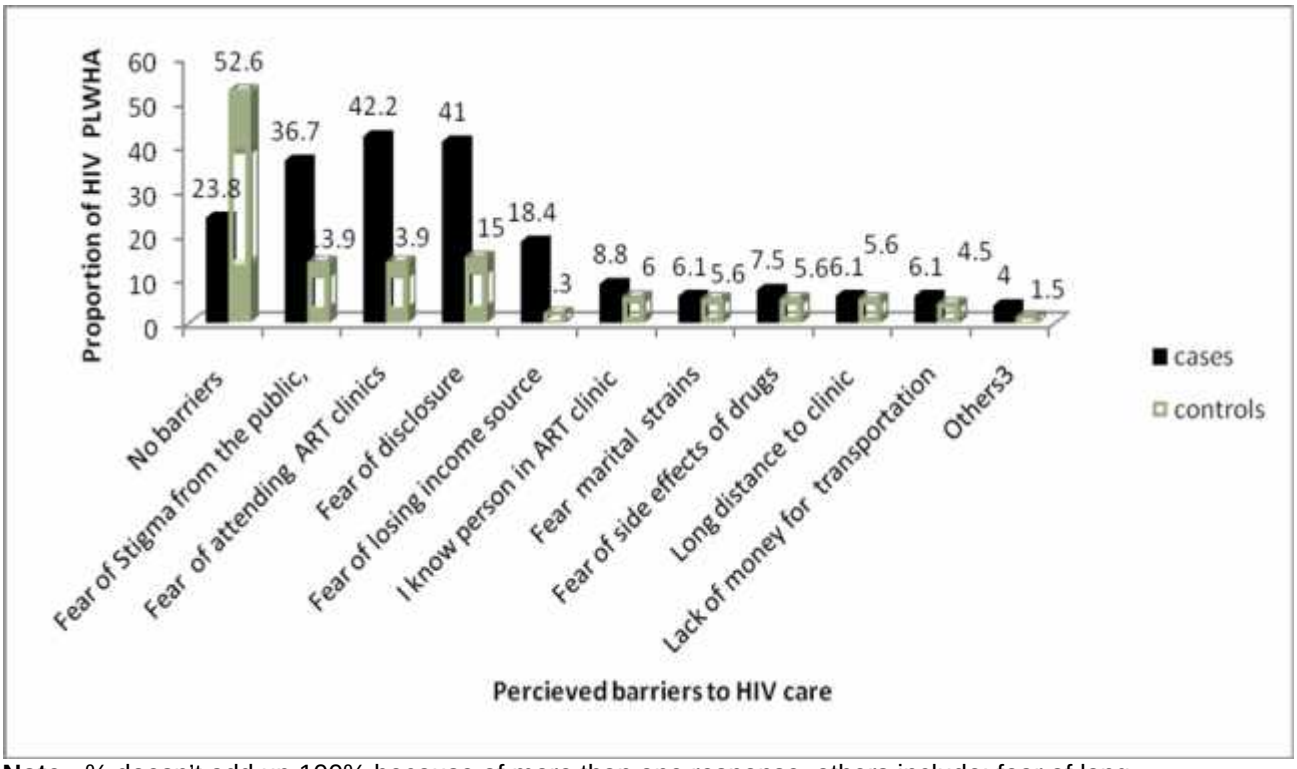


Note: Others include: coming for other services unknowingly, looking peoples testing for HIV, HIV testing campaign, due to sickness of my spouse.

Figure 3: Perceived need to wards HIV care responded by cases and controls, Southern Tigray zone, Northern Ethiopia, 2014

One hundred forty (52.6) of controls and 35(23.8) of cases reported no barrier in their way to receive care. Among the list of barriers respondents perceive in receiving HIV care, the most commonly responded barrier is fear of attending ART clinics 62(42.2) followed by fear of stigma from the public 54(36.7) among cases, where as fear of someone seeing when attending ART clinic 37(13.9) and fear of stigma from the public 37(13.9) followed by fear of disclosure 40(15) were the mostly reported barriers among controls (Figure 4).

Fifty six (38.1%) of cases and 82 (30.8%) of controls witnessed that they observed at least one HIV positive person stigmatized because of his /her HIV status in their community before they first come to HIV care (Table 4). Sixty (40.8%) of cases and 132(50.3%) of controls experienced high level of internalized stigma due to their HIV status.



Note: % doesn't add up 100% because of more than one response, others include: fear of long queues and don't know where to get HIV treatment

Figure 4: Perceived barriers in receiving HIV care responded by cases and controls, Southern Tigray zone, Northern Ethiopia, 2014

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5.2. Determinants of late presentation to HIV/AIDS care

On the bivariate logistic regression factors that had a P < 0.2 include, educational status, sexual contact with commercial sex worker, internalized stigma, witnessed stigma, depression, year of presentation to care, age category, number of life time sexual partners, presence of HIV infected family member, living with a person attending HIV care, level of social support, coping mechanism of first HIV positive result, socioeconomic status and time between testing positive and receiving care. Under the perceived need part: desire to protect my family, to know my CD4 count and severely ill as reasons for initiating care and under the perceived barriers part: fear of stigma and disclosure and fear of losing job or income source. Among the above factors, sexual contact with commercial sex worker was excluded from the final model because it doesn't fillfull the complete cell assumption for logistic reression (responsed by males only).

In the multiple logistic regressions, variables which were significantly associated at a 0.05 level of significance include; age groups 25-29 and 35-39, having two or more life time sexual partners, poor socioeconomic status, no HIV status disclosure to partner, two of the recent pairs of years of presentation, low house hold social support; under the perceived need factors: desire to protect family and severely ill , under the perceived barriers category, stigma and fear of losing job or income source(Table 4).The model were good fitting with its Hosmer and Lemeshow's goodness of fit test (H=0.51).

As can be seen from table 4, participants in the age group of 25-29 years were 3 times more likely to present late as compared to age group 18-24 (AOR = 3, 95 % CI: 1.15-8.12) and those in the age group of 35-39 were 4.1 times more likely to present late as compared to age group 18-24(AOR = 4.1, 95% CI: 1.35-12.46), the other age groups doesn't show any significant association.

The recent subsequent pairs of years of presentation were associated with decreased likelihood of late presentation as compared to the earliest pair (Before 2008).The risk of late presentation to HIV care among HIV positives who presented on the year 2011-2012, and 2013-2014 decreased by 69 %(AOR =.31, 95% CI: 0.12-0.77) and 86 % (AOR = 0 .14, 95% CI: 0.05-0.37) respectively as compared to

those presenting before the year 2008. But not significant reduction observed on the year 2009-2010 as compared to before the year 2008(Table 4).

Presence of more than one life time sexual partners were also associated with late presentation to HIV care. Participants with two life time sexual partners were 6 times more likely to present late as compared with participants with no life time sexual partner (AOR = 6 , 95% CI: 1.28-28.02). Participants with more than two life time sexual partners were also 5.2 times more likely to present late as compared to having none(AOR = 5.2 , 95 %CI: 1.08-24.76)(Table 4)

Table 4. Binary and multiple Logistic regressions showing determinants of late presentation to HIV/AIDS care, among PLWHA receiving HIV care, Southern Tigray zone, Northern Ethiopia, 2014

Determinants	Presentation to HIV care		COR (95% CI)	AOR (95% CI)	P-value
	Cases (%)	Control (%)			
Year of Presentation					.000
Before 2008	37(25.2)	46(17.3)	1	1	
2009-2010	62(42.2)	65(24.4)	1.2(.681-2.06)	.76(.33-1.73)	
2011-2012	27(18.4)	65(24.4)	.51(.277- .963)	.31(.12-.77)**	
2013-2014	21(14.3)	90(33.8)	.29(.153-.552)	.14(.05-.37)**	
Age category					.051
18-24	19(12.9)	63(23.7)	1	1	
25-29	35(23.8)	48(18)	2.4(1.23-4.73)	3.0(1.15-8.12)*	
30-34	36(24.5)	58(21.8)	2.0(1.06-3.98)	1.4(.52-3.65)	
35-39	28(19)	32(12)	2.9(1.41-5.96)	4.1(1.35-12.46)*	
40-44	16(10.88)	32(12)	1.7(.75-3.65)	1.1(.34-3.71)	
45+	13(8.8)	33(12.4)	1.3(.62-3.29)	1.3(.37-4.23)	
No. of Life time Sexual partners					
None	4(2.7)	28(10.5)	1	1	.050
One	49(33.3)	77(28.9)	4.4(1.47-13.47)	4.0(.86-18.59)	
Two	46(31.3)	98(36.8)	3.3(1.08-9.9)	6.0(1.28-28.02)*	
More than two	48(32.7)	61(22.9)	5.5(1.80-16.7)	5.2(1.08-24.76)*	
Presence of HIV Infected member					
Yes	16(10.9)	51(34.7)	1		
No	131(89.1)	215(65.3)	1.9 (1.06-3.54)		
Presence of HIV care attendee					
Yes	14(9.5)	44(16.5)	1		
No	133(90.5)	222(83.5)	1.8(1.1 -3.56)		
Witnessed stigma					
low stigma	91(61.9)	184(69 .2)		1	
High stigma	56(38.1)	82(30.8)	1.4(.90-2.10)	1.7(.93-3.32)	
Depression					
Not depressed	56(38.1)	154(57.9)	1	1	
Depressed	91(61.9)	112(42.1)	2.2(1.47-3.37)	1.5 (0.82-3.0)	
Level of Social support					
Poor social support	103(70)	95(35.7)	4.2(2.73-6.49)	2.3(1.26-4.30)*	
Good social support	44(30)	171(64.3)	1	1	

Note: * shows significant ($p \leq 0.05$) & ** shows highly significantly ($p < 0.001$), Underlined figures are overall p-values

Table 4. Continued…	Presentation to HIV care				
Factors	**Case (%)**	**Control (%)**	**COR (95% CI)**	**AOR (95% CI)**	**pvalue**
Wealth quintile(SES)					.035
Lowest	40(27.2)	42(15.8)	3.2(1.63-6.37)	1.05(.38-2.83)	
Second	39(20.4)	47(17.7)	2.8(1.43-5.52)	3.3(1.31-8.46)*	
Third	24(16.3)	57(21.4)	1.4(.70-2.90)	.8(.27-2.31)	
Fourth	26(17.7)	59(22.2)	1.5(.74-3.0)	1.1(.44-2.82)	
Highest	18(12.2)	61(22.9)	1	1	
Disclosure to Partner					
Yes	26(35.6)	72(59)	1	1	
No	47(64.4)	50(41)	2.6(1.43-4.74)	2.0(1.05-4.14)*	
HIV support groups in community					
Yes	70(47.6)	150(56.4)	.70(.47-1.05)		
No	77(52.4)	116(43.6)	1		
Diet & life style change for positive result					
Yes	49(33.3)	122(45.9)	.59(.39-.89)	.45(.24- .87)*	
No	98(66.6)	144(54.1)	1	1	
Desire to protect family					
Yes	23(15.6)	126(43.4)	.20(.12-.34)	.19(.09 -.37)**	
No	124(84.4)	140(52.6)	1	1	
To know CD4 count					
Yes	5(3.4)	33(12.4)	.25(.095-.65)	0.37(0.09-1.43)	
No	142(96.6)	233(87.6)	1	1	
Severely ill					
Yes	89(60.5)	66(24.8)	4.7(3.01-7.16)	4.3(2.26-8.0)**	
No	58(39.5)	200(75.2)	1	1	
Fear of stigma					
Yes	94(63)	65(24.5)	5.5(3.5 – 8.5)	4.4(2.2-8.3)**	
No	53(37)	201(75.5)	1	1	
Fear of disclosure					
Yes	60(40.8)	40(15)	3.9(2.43-6.23)	2.0(.99-4.32)	
No	87(59.2)	226(84.9)	1	1	
Fear of losing job /income source					
Yes	27(18.4)	6(2.3)	9.8(3.92-24.2)	6.8(1.8-24.54)*	
No	120(81.6)	260(97.7)	1	1	

Note: * shows significant ($p \leq 0.05$) & ** shows highly significantly ($p < 0.001$)

Underlined figures are overall p-values

Socioeconomic status were also associated with late presentation, participants in the second wealth quintile were 3.3 times more likely to present late as compared with the highest wealth quintile group (AOR = 3.3,95% CI:1.31-8.46). Partner or spousal HIV status disclosure were found to deter late presentation, among married participants those who do not disclosed their HIV status to their partner were 2 times those of who disclosed to present late (AOR=2 , 95% CI : 1.05-4.14). Level of social support were strongly associated with late presentation to care, participants who had poor house hold social support were 2.3 times more likely to present late as compared to those who had good social support at their home (AOR=2.3 , 95% CI 1.26-4.30) (Table 4).

Barriers perceived by PLWHA were also associated with late presentation. Participants who reported fear of stigma were 4.4 times more likely to present late as compared to those not (AOR = 4.4,95% CI : 2.23-8.27) and who reported fear of losing income source were 6.8 more likely to present late as compared to not(AOR = 6.8 ,95% CI : 1.8-24.54)(Table 4).

The way participants perceived HIV care benefits them, also attributed a discrepancy on the stage at presentation. Participants who responded protecting family as their reason behind initiating care were 0.81 times less likely to present late as compared to those not (AOR = .19, 95%CI: 0.09 -.37). On contrast, participants who responded severe illness as a reason for initiating care were 4.3 times more likely to present late as compared to those who responded not(AOR = 4.3, 95 % CI : 2.26-8.0)(Table 4).

5.3. Result from Qualitative data (FGD)

Atotal of 12 PLWHA, 6 male and 6 females participated in the FGD.The age of the participants' ranges 27 to 55. Sex and age of participants were used to create identification for quoted responses.

Barriers in receiving HIV care: According to the FGD participants, PLWHA delay to care due to fear of stigma from the public and health workers they know. Expectation of bad responses /or reaction from their relatives,hinder people not to disclose their HIV status and public stigma discourage taking treatment or attending HIV care clinics.Due to this no people with good income use HIV care in the nearer facility majority of the users are the poor and rural people.

> "… *I was worrying about what peoples will talk about me if they hear I tested positive"… Male-32 "When I become aware of my HIV status my challenge was fear of health professionals and other individuals that I know while attending the ART clinic" Female -27.*

Besides, fear of losing income source /former job, makes people cover their HIV status and avoid taking HIV care not to be seen by their customers and work mates.This is exacerbated by having no stable income source.In work places, people living with HIV /AIDS are still stigmatized and considered as they are incapable of doing their duties appropriately.

> *"People seem positive to HIV positives at first, but the pain is they gradually change their feeling and treat you as 'weak' to accomplish your former duty" …HIV positives will be shifted to lower status/position", M ale-55*

> *"Although they are HIV positive, numerious commercial sex workers in the town continue their commercial sex work for the young adolescents." Female -27*

Use of non-medical treatment for HIV

As to the FGD partcipants, people try different kinds of non-medical treatments before attending HIV care and this is associated with delayed entry to care.People put their illness as it related to other diseases and /or 'qole' and try medicines from traditional, home medicines and from drug stores.People recommend dried Wild boar's meat, Wild boar's bile, Camels milk and Camels meat and other traditional

plants as medicine for HIV.In addition people also undergo a prayer and sacrifice a hen, a white sheep to their god or 'qole'.

> *"…then she ate a dried Wild boar's meat and Wild boar's bile", Female-30*
>
> "*…he told me a very bitter plant called ' Oure' or 'Eret' is medicine for HIV and he have been drinking it until he end up with death",Female-30*
>
> *"I go to a local traditional healer called 'TonqualIi' or magician and spend around 3000 Eth.Birr then he told to my wife wash his body using sheep's blood and dung added together ….",Male-38*

In addition, participants mentioned that, drugstores and pharmacies are hosts and means of harborage for undiagnosed and purposely hiding patients with HIV, and they use them for elongating time with out disclosing their HIV status.

> *"There was one HIV positive neighbor having symptoms of diarrhea, she buys drugs from one pharmacy, she will be relived from her symptoms for some period and then go to other pharmacy on the other day…." Female-30*
>
> "*my husband were severely diseased and confined to bed for around 6 months he have been telling me as his illness is due to other diseases like ,malaria, and he has been frequently using drugs from drug stores" Female-34*

Reasons for initiating care

Protecting family is driving force behind initiating HIV care as most FGD participants replied.

> *"We should let Peoples think for the generation…If my children are healthy….." Male -32 … "My child is negative" Female-27, "My wife and children are negative" Males -32, 55*

Many participants agreed that encouragement from one's spouse and HIV positive friends promotes presenting to care. When HIV positives are approached by HIV positive counter parts this makes easier for them to be encouraged and attend care easily.

> "*… I show him my ART drugs as I am taking treatment and he become persuaded to take his treatment", Female -55*
>
> *"I become angry and decided not to take any treatment for one year. Later on my friends were taking HIV treatment and they encouraged me to take treatment. "Male-28*

Once they become aware of their status, females encourage early care including for their spouses.Where as, males delay presenting to care once they know their status because they think as they are healthy, but females are prone to the opportunistic infections and they come to care as soon as they tested positive during VCT programs.

> *"Males say that we are healthy even though we have the HIV and nothing bad is going on us,but, females become ill and suffer from headache and they come to ART clinics saying I tested positive for HIV … "Female -27*

> *"….later on my wife gone to health center and tested positive after that she encouraged me to be tested …"Male-38*

> *"…..I then persuaded my husband to be tested for HIV and avoid taking other drugs from outside, or drug stores'' Female -34*

As witnessed by participants, house hold and religious social support promotes early care seeking.Religious leaders especially Priests in the Orthodox Church, persuade their penances children to undergo HIV testing and start HIV care whenever they disclose their status to their Priests.In other ways lack of social support is associated with poor care seeking and adverse outcomes.

> *"My brother shoutes on me, you should be tested and know the cause for your illness today; I will help every expense that follows …..."Female -35*

> *"…she was severily ill and her family, said we don't want to take care for the dead" Female -27*

Stage of delay to care (Late testing versus receiving care after testing)

As to the FGD participants, late presentation is after being tested positive but, not due to late testing.Peoples are ready/ devoted/ to be tested first and to know their HIV status but, they hide after they know their HIV status.Moreover, due to their perception of risky exposures,people are aware of their ststus.

> *"The HIV testing sites that are conducted using shades in the town are always crowded by persons being tested especially males. But, they doesn't come to care once tested positive [F-55]and they will be only accessed after they become diseased through house to house tracing by volunteer HIV support groups and or they come being carried through Stretcher or Ambulance …" Female-34*

7. Discussion

This study investigated determinants of late presentation to HIV /AIDS care when ART services are accessible to local health units in Ethiopia. Several other studies reported different risk factors of late presentation to care. The current study assessed individuals perceived need to wards receiving HIV care, perceived barriers to HIV care , socioeconomic status, the role of support groups both at house hold and community level on late presentation.

In this study, participants aged 25-29 and 35-39 years are at increased risk of presenting late to care as compared to younger age groups (18-24).This finding is similar to finding in Italy[54] and Germany[37, 54].Despite age groups differences,the general trend of increasing risk of late presentation with age is in line with a finding in other areas; Belgium and France in which patients aged 30-49 years were at increased risk of “delayed presentation to care” and presentation to care with advanced HIV disease as compared to patients aged <30 years[26], This finding is also in line with other studies in Uganda(46 – 60 versus 16–25) years old[13],India(35-44 and > 40 yrs as compared to 25-34 yrs)[12] and Nigeria (> 35 years versus 15-35 yrs)[35]in which older ages presented late. Another study in Uganda also reported similar trend, participants who were 31–45 years old had 1.6 times the odds of being diagnosed late compared to participants who were 18–30 years[21]. This may be due to older ages being internally stigmatized for their misbehaviors. However, a study in India reported against this finding, male HIV positives aged <25 years presented late as compared to 25-35 years[36]. This may be due to difference design, given that the Indian study was stratified by gender and found an association only in males.

In this study, HIV positives with two or more life time sexual partners are also at increased risk of late presentation to HIV care than those having none. This finding is in line with the findings in South Wollo, Ethiopia in which longer time spent, or spending 25-120 and greater than 120 months with steady partner, increased the risk of delayed presentation to care[24] this may be due to fear of losing sexual partners. However this finding is in contrast to findings in Uganda[21] and Venezuela [41], in

which participants with more than one sexual partner prior to care present early as compared to those having none. Although an increasing trend to present late the longer a person had a steady partner were observed in Venezuela. This may be due to the largely impeded taboos regarding sexually active behaviors in Ethiopian context and being hiding for their wrong behaviors from their community [55].

HIV positives at second wealth quintile are at increased risk of late presentation to HIV care as compared with highest wealth quintile. A systematic review on three indicators of socio economic status (education, income and occupation) documented lack of association of socioeconomic status with adherence to ART in low- and middle-income countries [42]. However, a study in Uganda[13] reported association of late presentation with some socio-economic variables separately. Another study in Ethiopia reported a direct association between living in rented house and late presentation. Findings from Durban, South Africa also documented association between goings without health care because needed money for food, clothing, or housing and Presentation with late-stage HIV disease[16]. The finding of the present study adds up the previous findings by incorporating additional variables of socioeconomic status and identifying its effect on HIV care receiving behavior of HIV positives.

Among the social environment determinants, HIV status disclosure to partner and house hold social support were associated with late presentation to HIV care. PLWHA with poor social support are at an increased risk of late presentation as compared with those having good social support. The qualitative data also enrichs this finding; house hold support and support from friends improving timely care seeking. This is in line with finding in Durban, South Africa [16]and other study in Africa[43].This may be due to, feeling less encouraged and not being supported may affect HIV positives not to disclose their HIV status and tell their relatives about HIV care.Participants who do not disclose their HIV status to their partner are at increased odds of late presentation as compared with those who do. This finding is in line with studies in Uganda[13],Kenya[30]and Ethiopia[24].This may be due to the unprecedented support following disclosing ones status.

HIV positives presenting on the recent years of presentation are at decreased risks of late presentation as compared before the year 2008.This is in line with findings in Nigeria[35],Belgium and France[26], New York City[56] and India[36].This may be due to the increasing access, awareness and reduction in stigma through time[52, 57, 58]

Fear of stigma and fear of losing job /income source are barriers perceived by PLWHA associated with late presentation in this study.Participants who dread of stigma are at increased risk of late presentstion as compared to not and participants who fear losing job /income source are at increased risk of presenting late as compared to those not.This is also supported by the qualitative data with public stigma and losing income the mainly reported barriers.The finding on Stigma is in line with systematic review conducted in sub Saharan Africa, which documented stigma and fear of disclosure as main reported barriers [34].The finding on fear of losing income source as barrier behind receiving HIV care is similar with findings of systematic review in Africa[34]and study in Zimbabwe [59] ,in which, being poor and uninsured were connected with lack of medical care for those with AIDS. Similarly, financial barriers were reported from South Africa although service delivery, structural barriers are prevailing [16].This may be due to, losing their income source or due to losing of customers from the underlining stigma.

In the present study, participants initiating care as the result of severe illness are at increased risk of late presentation where as those due to their desire to protect family are at decreased odds of late presentation as compared to none.This is witnessed by qualitative data, in which protecting family and children were driving the need to initiating HIV care. The finding for severe illness as reason is similar with finding of systematic review [34] in which perceived poor health predicted retention to care. Unfortunately this is also associated with increased risk of late presentation, in the present study. The documented association between being symptomatic during presentation to care and late presentation in Ethiopia [24, 25] is related to this finding. There are no quantitative studies that measured the association between perceived need and presentation to care, but qualitative studies documented on the

association between patients desire to protect family and timely care seeking[23, 31, 53].

There is no significant association between use of non-medical treatment and sex of respondent with late presentation both in the bivariate and multiple logistic regressions. However, results from the FGD indicate that males and non –medical treatment users present late for HIV care. This may be due to, respondents may not tell their use of other medicines correctly.

Unlike to finding in Jimma, Ethiopia[25] there is no significant associaition between time from testing positive to presenting to care with late presentation.How ever, results from the FGD, indicate that HIV positives stay long time after testing positive with out reciving care.This difference may be due to exact first positive dates may n't be recorded correctly.

This study has also incorporated variables significant in previous studies like; presence of HIV care attending person, depression, presence of HIV infected house hold member, presence of HIV support groups in the community and witnessed stigma. However, these variables were only significant in the bivariate analysis but not in the Multiple logistic regression. This may be due to the difference in setting given that this study is conducted mainly at health centers.

8. Strengths and Limitations of the study

Strengths of the study

As strengths this study incorporated diverse determinant factors, meeasured socioeconomic status using wealth index and conceptualized determinants based on established model.

Limitation of the study

The study may be prone to recall bias and some variables difficult to measure accurately.

Selecting HIV positives only recently enrolled to care were not done ⇨ Dealing the current scene were impossible.

9. Conclusion

This study identified, in this study , independent determinants of late presentation in local health center setting, where HIV care services are accessible at local heath service outlets. These determinants can be categorized under broader domains of determinant factors including : demographic(age group), social environment(HIV status disclosure,socialsupport),behavioral(life time sexual partners), economic(socioeconomic status), perceived barriers (fear of stigma and fear of losing income source) and perceived need(desire to protect family and due to severe illness).

Findings from the FGD also showed that, male sex, use of non-medical treatment, fear of losing/transferring from best jobs, and fear of stigma are the factors that make HIV positives to present late.On contrast, encouragement from HIV positive friends and spouse (female partners) and support from other family members and religious leaders (especially to their penance children) promote early care seeking.

10. Recommendations

To HIV control and prevention offices

It is better to

– Strengthen involvement of, females and HIV positives in early care seeking efforts.
– It is better to work place discrimination be sensitized in public and private organizations.

To Heath educators

It is better to

– To implement interventions on building the perceived needs of HIV positives to wards HIV care.
– To implement behavioral interventions targeting; males, young adults and sexually active sections of society.
– Educate on wrong perceptions and myths of people on HIV cure.

To providers at pharmacies, drug stores & traditional healers

– Better to advice people to seek additional services including HIV testing at medical facilities

To Researchers

– Researches should be conducted on unmeet needs of HIV positives that affect care seeking
– Additional research should be conducted prospectively on newly presenting HIV positives

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12. Annexes

Annex I: Information sheet

Title of the Research Project

Determinants of Late Presentation to HIV/AIDS Care among People living with HIV/AIDS enrolled in HIV chronic care clinics in Southern Tigray zone, Northern Ethiopia: Institution based un-matched Case Control Study

Name of Principal Investigator: Goitom Halefom (BSc)

Name of Advisors:

1. Ato Akilew Awoke (BSc,MPH)
2. Ato Yalemzewd Assefa (BSc,MPH)

Name of the Organization: Institute of Public Health, College of Medicine and Health Sciences, University of Gondar

Name of the Sponsor: University of Gondar

Introduction

This information sheet is prepared with the aim of explaining about the research project that you are asked to join by the group of research investigators. The research group includes one main principal investigator, six trained data collectors and two advisors from University of Gondar.

Purpose of the research project

The purpose of this project is to identify determinants of late presentation to HIV/AIDS care among people living with HIV/AIDS enrolled in ART clinics in health institutions in Southern zone of Tigray, Northern Ethiopia.

Procedure

The study mainly uses data obtained through chart review and study subject's interview .Permission was obtained from University of Gondar, Southern Tigay zonal health department, the selected health institutions and as well as study subjects.

Risk and/or Discomfort

By participating in this research project you will not feel any discomfort except wasting some time (around 40 minutes). There is no risk in participating in this research.

Benefits

There is no direct benefit for your involvement in the study, but your participation is necessary for the accomplishment of the study purpose and indirectly you will be benefited from research outcome in reducing delays to care seeking by identifying reasons for delays of people living with HIV/AIDS.

Confidentiality

Your information is confidential and your name is not written on the questionnaire only data for what you are going to be interviewed are utilized for the research purpose.Information will be stored in a file and kept without your name, but a code number assigned to it. And it will not be accessed by anyone except the principal investigator.

Right to Refusal or Withdrawal

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time without losing any of your right.

Persons to contact

This research project was reviewed and approved by the Ethical review board of Institute of Public Health, University of Gondar. If you have any questions or concerns about this study please contact the following individuals:-

Advisors:

1. Ato Akilew Awoke ; Institute of Public Health, CMHS, University of Gondar Phone no: +251-918-03-53-92,email:akilew24@gmail.com,
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Principal Investigator:

1. Goitom Halefom

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Annex II: Consent Form

Interviewer: Welcome! My name is ---------- I am working here in this hospital /Health center as ART Nurse. You are required here for interview for a research conducted by Ato Goitom Halefom Senbete a master's degeree student in University of Gondar, on determinants of late presentation to HIV /AIDS care among People living with HIV/AIDS in Southern zone of Tigray. You were included as participant for interview because you are selected randomly. You will be asked a series of questions for around 35 minutes. Your data is confidential and your name will not be written on the questionnaire only data for what you are going to be interviewed are utilized for the research. Participation to the study is voluntarily. There is no direct benefit for your involvement or no cost for your not involvement in the study, but your participation is necessary for the accomplishment of the study purpose.

Interviewer:	Are you voluntary to participate?	
Participant:	1. Yes	2. No,
Interviewer:	Thank You, your consent and signature please.	Thank You, you can go
Participant:	I understand fully the benefit of the study absence of any risks on me and I hereby approve my consent to take part in the study with my signature signature_____	

ANNEX III: Questionnaire

1. Health Facility Name _____
2. Code number (Health Facility Name/001 …)_____

S.NO	Questions	Response	Remark
A	From records review in chart: both fields should be filled the results of initial visit of the patient.		
Code	Part I: Stage at First Presentation to HIV/AIDS care		If initial CD4 and WHO stage are absent do not Interview The patient
101	Year of presentation /enrollment to HIV care	_____/_____/_____ E.C	
102	CD4 count at First enrollment/presentation to HIV/care	_____Cell/ mm^3	
103	WHO HIV/AIDS clinical stage at First presentation/ enrollment in to HIV/AIDS care	1. Stage I 2. Stage II 3. Stage III 4. Stage IV	
B.	For Interview: All Questions Are intended to measure the aspects of the patient before coming to the HIV care clinic for the first time. So questions should be asked as stated in the questionnaire or all questions should be asked by stating before coming to HIV care for the first time…..		
Code	PART II: Socio-demographic characteristics		
201	Sex	1. Male 2. Female	
202	Age at first presentation	_____ years	
203	Marital status at presentation to care	1. Never married 2. Married 3. widowed, 4. separated/divorced	
204	Presence of Pregnancy at presentation	1. Pregnant 2. not pregnant	If 101 Female
205	Educational level at presentation	1. Can't read /write 2. Primary(1-8) 3. Secondary(9-12) 4. University /college	
206	Residence	1. Urban 2. Rural	
207	Occupation	1. Student 2. House wife 3. Government employee 4. Private sector employee 5. Trader 6. Farmer 7. Daily laborer 8. Unemployed 9. Sex workers	

Code	PART II: Perceived need	Response	Remark
301	When did know you positive HIV status for the first time?	------/-------/---------	
302	Where did you tested HIV positive for the first time	1. At this health facility 2. Other (specify) ----------	
303	When you tested positive What where our reason for testing for HIV	1. VTC , 2. PIHCT , 3. PMTCT, 4. Self-initiative/Fear of risky exposures 5. Seeking care for other disease	
304	How do you contract HIV /AIDS?	1. When caring to seek parent/relative 2. Sexual transmission 3. Using sharp materials 4. Others(specify)	
305	What initiated you to start HIV care?	1. Desire to protect baby, self and family 2. To know CD4 count and begin HIV treatment when needed 3. Encouragement from partner, friend, work mate or family member 4. Not healing using other options 5. severely ill 6. Fear of severity of disease/death from HIV 7. Hope of Feeling better/well after taking ART 8. I know taking HIV treatment is must 9. Don't know 10. Others (specify)	
307	Had you received any treatment/care for HIV in non-medical setting before coming here?	1. Yes 2. No	
308	If yes for 307 from which type of facility do you seek care?	1. Traditional healer 2. Drug stores, 3. Home medicines 4. Religious (tsebel) 5. Others(specify	More than one possible
Code	PART IV : Knowledge about Antiretroviral treatment (ART)	Response	Remark
401	Have you heard about ART before coming to this facility?	Yes 2. No	If 2 go to part V
403	Do you know either of the following before you start HIV care?		
	ART is obtained free of charge from hospital	1. Yes 2. No	
	ART can prolong life	1. Yes 2. No	

	ART is life-long treatment	1. Yes 2. No	
	ART is used only when someone is very ill	1. Yes 2. No	
	An HIV-infected pregnant woman can be treated with ART	1. Yes 2. No	
	ART reduces levels of HIV virus in the body	1. Yes 2. No	
Code	PART V: Perceived health service delivery barriers	Response	Remark
501	Was there any factor you hindered from using HIV care before?	1. Yes 2. No	If 2 go to Part 503
502	Which one of these challenges (factors) hindered you from using care?	1. ART Service given by persons that I know 2. Lack of money for transportation 3. HIV clinics not opened at convenient times 4. Fear of someone finding/seeing me when I attend ART clinics 5. Fear of marital Relationship strains /or partner violence 6. Fear of losing job or/income source 7. Fear of side effects of drugs 8. Fear of disclosure 9. Fear of Stigma from the public 10. Partner controlling finances 11. Fear of Long Queues, 12. Long distance (long)travel time 13. Don't know where to get HIV treatment 14. Other(specify)	More than one response possible
503	How far is your home from your nearer HIV care clinic?	_____ in kilometers --------hrs of walk on foot	
Code	PART V:Behavioral factors	Response	Remark
601	Do you drink alcohol	1. Yes 2. No	
602	How many drinks do you have on average day?	1. 1-2 drinks/day 2. 3-4 drinks /day 3. 5-6 drinks /day	
603	How many steady relationships have you ever had?	1. One 2. Two 3. More than two	
604	Had you have sexual contact with commercial sex worker before you come to care?	1. Yes 2. No	
Code	PART VII : Social environment determinants	Response	Remark
701	With whom were you living when you come to HIV care first?	1. Alone 2. With family	

		3. With partner	
702	Had there HIV infected household/family member when you come to treatment?	1. Yes 2. No	
703	Was there some body living with you attending HIV care?	1. Yes 2. NO	
704	Had you have children < 10 years to look for when you come to care?	1. Yes 2. No	
705	When you come to care, had you disclosed your HIV status	1. Yes 2. No	
706	If yes 705 to which of the following did you disclosed your status?	1. Partner 2. Family member 3. Neighbors 4. For religious care giver	
707	When you become aware of your HIV status first, what mechanisms did you used to cope your newly?	1. Seek advice /support from Partner, Family or Spiritual care giver 2. Seek Traditional medicines 3. Changed my diet and life style 4. Keep my status secrete	
Code	Social support scale	Response (None of the	Remark
708	If you needed it, how often is someone available?	time(NT),Sometimes(ST), A lot of times (LT),Nearly all of the times(NAT) , All of the times (AT)	
	To help you if you were confined to bed?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	To take you to the doctor if you need it?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	To prepare your meals if you are unable to do it yourself?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	To help with daily chores if you were sick?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	To have a good time with?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	To turn to for suggestions about how to deal with a personal problem?	1. NT 2. ST 3. LT 4. NAT 5. AT	
	Who understand your problems?	1. NT 2. ST 3. LT 4. NAT5.AT	
	To love and make you feel wanted?	1. NT 2. ST 3. LT 4. NAT 5. AT	
Code	Depression Scale	Response	
709	Are you basically satisfied with your life?	1. Yes 2. No	
	Do you feel that your life is empty?	1. Yes 2. No	
	Are you afraid that something bad is going to happen to you?	1. Yes 2.No	
	Do you feel happy most of the time?	1. Yes 2. No	
Code	Internalized stigma scale	Response	Remark
710	Do you agree with one of the following		
	It is difficult to tell people about my HIV infection	1. Yes 2. No	
	Being HIV positive makes me feel dirty	1. Yes 2. No	
	I feel guilty that I am HIV positive	1. Yes 2. No	
	I am ashamed that I am HIV positive	1. Yes 2. No	
	I sometimes feel worthless because I am HIV	1. Yes 2. No	

	positive		
	I hide my HIV status from others	1. Yes 2. No	
	It is difficult to tell people about my HIV infection	1. Yes 2. No	
	Being HIV positive makes me feel dirty	1. Yes 2. No	
	Part VIII: Community level determinants	Response	
Code	Presence of community support groups	1. Yes 2. No	
801	Are there HIV support group working on HIV/AIDS in your community?	1. Yes 2. No	
802	IF yes For 801 what type of support groups	1. Community support groups 2. Religious supports 3. HIV support groups,	
Code	Witnessed stigma/Discrimination in community	Response	
803	Do you know someone who has had the following happen to him/her because of HIV infection?		
	Lost customers to buy his/her produce/goods or lost a job.	1. Yes 2. No	
	Abandoned by spouse/partner or family.	1. Yes 2. No	
	Teased or sworn at.	1. Yes 2. No	
	Physically abused	1. Yes 2. No	
	Lost respect/standing within the family and/or community.	2. Yes 2. No	
Code	Part VII: Wealth index of households related questions	response	Remark
911	A. For urban inhabitants		If 206 urban
	Private home	1. YES 2. NO	
	Electric city	1. YES 2. NO	
	A radio	1. YES 2. NO	
	A Television	1. YES 2. NO	
	A Mobile telephone	1. YES 2. NO	
	A Non-mobile telephone	1. YES 2. NO	
	A Refrigerator	1. YES 2. NO	
	A table	1. YES 2. NO	
	A chair	1. YES 2. NO	
	A bed with cotton/ sponge/spring matters	1. YES 2. NO	
	An electric mittad	1. YES 2. NO	
912	B. For Rural inhabitants		If 206 Rural
	private home	1. Yes 2. No	
	A radio	1. Yes 2. No	
	A mobile telephone	1. Yes 2. No	
	A bed with cotton/ sponge/spring matters	1. Yes 2. No	
	A kerosene lamp/pressure lamp	1. Yes 2. No	

	Annual farm product per quintal	_____quintal	
	How many (local units) of agricultural land do you own	_____in number	
	How money of the following domestic animal does your household own?		
	Milk cows, oxen or bulls	_____in number	
	Horses, donkeys, or mules	_____ in number	
	Goats?	_____ in Number	
	Sheep?	_____ in Number	
	Chickens?	_____ in number	

ANNEX IV: FGD Guide

1. What are the reasons for HIV positives not to come to Care early?

2. What options / medicines do HIV positive people use other than ART?
3. At what stages of HIV care cascade do people become late
    a. At testing?
    b. At receiving care after being aware of HIV positive?
4. Which group of people presents late to care?
5. What community level factors
    a. Encourage people to start HIV care?
    b. Discourage people not to start HIV care?
6. What are the barriers HIV positives perceive in receiving HIV care?
7. What should be done for people not to late?

ANNEX V: Tigrigna version queistionnaire

1. ብዛዕባ እዚ መፅናዕቲ ዝገልፅ ሓበሬታ /መረዳእታ መውሃቢ ወረቀት

ናይቲ መፅናዕቲ ርዕሲ

አብ ዞባ ደቡብ ትግራይ አብ ዘለዉ ትካላት ጥዕና ዘለዉ ናይ ፀረ-ኤች.አይ.ቪ ኤድስ መድሓኒት ተጠቀምቲ መጀመርያ ሕክምና ንምርካብ ዘንጊያም ናብ ሕክምና ክአትዉ ዝገብሩዎም ምክንያታት

ዋና ተመራማሪ ፡ ጎይቶም ሓለፎም (BSc)

አማኻርቲ

3. አይተ አቅለው አወቀ (BSc,MPH)
4. አይተ ያለምዘውድ አሰፋ (BSc,MPH)

ሽም ዩኒቨርስቲ ፡ ጎንደር ዩኒቨርስቲ ናይ ሕክምናን ጥዕና ሳይንስን ኮሌጅ ፣ ናይ ሕብረተሰብ ሓለዋ ጥዕና ኢንስቲቱት

ናይቲ መፅናዕቲ ወፃኢ ዝሽፍኖ አካል፡ ጎንደር ዩኒቨርስቲ

1. **መእተዊ** ፡-
   እዚ ሓበሬታ መውሃቢ ወረቀት ዝተዳለወ ብዛዕባ እዚ እትሳተፎ /ዮ መፅናዕቲ ገለፃ ንምግባር እዩ ፡፡ እዚ መፅናዕቲ ብጅምላ መፅናዕቲ ዘካይዱ አካላት ዝካየድ እንትኸውን አቲ መፅናዕቲ መካየዲ ጉጅለ ካዓ እዞም ዝስዕቡ አካላት ዝሓዘ እዩ፡፡ ሓደ ዋና ተመራማሪ፣ሽዱሽተ ዝሰልጠኑ መረዳታ አከብቲ(ነርስ) ን ክልተ አማኻርቲ ከዓ ካብ ጎንደር ዩኒቨርሰቲ ፡፡

2. **ዓላማ ናይቲ መፅናዕቲ፡-**

   አብ ዞባ ደቡብ ትግራይ አብ ዘለዉ ትካላት ጥዕና ዘለዉ ናይ ፀረ-ኤች.አይ.ቪ ኤድስ መድሓኒት ተጠቀምቲ መጀመርያ ሕክምና ንምርካብ ዘንጊያም ናብ ሕክምና ክአትዉ ዝገብሩዎም ምክንያታት ንምፅናዕ እዩ፡፡

3. **እቲ መፅናዕቲ ዝካየደሉ መንገዲ፡-**

እዚ መፅናዕቲ ዝካየደሉ ብመጀመርያ ደረጃ ንተሳተፍቲ ብዝግበር ቃለ መጠይቕ ኮይኑ እዚ መጽናዕቲ ንምክያድ ካብ ጎንደር ዩኒቨርስቲ ናይ መጽናዕቲ ስነ ምግባር ቦርድ አፍልጦ ተዋሂቡዎ፣ ካብ ቢሮ ሓለዋ ጥዕና ዞባ ድቡብ ትግራይን አቶም ዝተመረጹ ጥዕና ትካላትን ፍቃድ ተዋሂቡዎ እዩ፡፡

4. **አብ መፅናዕቱ ብምስታፍ ዘስዕቦ ጉድአት /ሳዕቤን/፡-**

አብዚ መፅናዕቲ ብምስታፍካ/ኪ ንቃለ መሕትት ካብ እተጥፍኦ/ዮ 30-40 ደቒቓ ወጻኢ ምንም ዓይነት ዝበፅሓካ/ኪ ጸገም ወይ ከዓ ሓደጋ የለን፡፡

5. **ናይዚ መፅናዕቲ ረብሓ/ጥቅሚ ፡-**

አብዚ መዕናዕቲ ብምስታፍካ/ኪ ንስካ ቀጥታ እትጥቀሞ ጥቅሚ ዘይክህልው ይክእል እዩ። ነገር ግን ናትካ ተሳትፍ ሰባት ናብ ኤች.አይ.ቪ ኤድስ ሕክምና ቀልጢፎም ንክይጅምሩ ዝገብርዎም ምክንያታት አብ ምፍላይን መጻኢ ወለዶ አብ ምድሓንን ዓብዩ እጃም አለዎ። ስለዚ ብተዘዋዋሪ መጻኢ ወለዶ ብምድሓን ተጠቃሚ ኢካ ማለት እዩ።

6. ናይ መረዳእታ ምስጥራዊነት ፡-

ነዚ መዕናዕቲ እትህቦ ዝኾነ ይኩን መረዳእታ ብምስጢር ዝተሓለወ እዩ። ብመጀመርያ ሽምካ አብዚ ወረቀት አይፅሓፍን ፣እዚ ዝእከብ መረዳእታ ጥራሕ ነዚ መዕናዕቲ አገልግሎት ይውዕል። ምስተአከበን ኑቲ መዕናቲ አገልግሎት ምስ ውዓለን እቲ ወረቀት ተቆሊፉ ሰብ አብ ዘየግንዮ ቦታ ይቕመጥ።

7. አብዚ መፅናዕቲ ናይ ዘይምስታፍ መስል፡-

አብዚ መዕናዕቲ ምስታፍካ አብ ፈቓደኛነት ዝተመስረተ እዩ። ምስታፍ ተዘይደሊካ እቲ ቃለ መጠይቅ ምስተጀመረ ኮነ ቅድሚ ምጅማሩ ዘይምስምዕማዕ ይካአል እዩ።

8. ንዝበለፀ ሓበሬታ፡-

አዚ ናይ መጽናዕቲ መደብ ብ ናይ ጎንደር ዩኒርሲቲ ምርምር ስነ-ምግባር ኮሚቴ ተገምጊሙ ዝጸደቐ አዩ። ብዛዕባ እዚ መጽናዕቲ ዝኾነ ይኩን ዓይነት ሕቶ ወይ ከዓ ሐሳብ እንተሃልዩኩም ነዞም ዝስዕቡ አካላት ደውልኩም ምርካብ ትኽእሉ እኹም።

አማኸርቲ

ናይ አማኸርቲ አድራሻ

1. አይተ አቅለው አወቀ (BSc,MPH)፡ ጎንደር ዩኒቨርሰቲ ናይ ሕክምናን ጥዕና ሳይንስን ኮሌጅ ፣ ናይ ሕብረተሰብ ሓለዋ ጥዕና ኢንስቲቱት፡ ስልኪ ቁፅሪ: +251-918-03-53-92,ኢ -ሜይል : akilew24@gmail.com
2. አይተ ያለምዘውድ አሰፋ (BSc,MPH)፡ ጎንደር ዩኒቨርሰቲ ናይ ሕክምናን ጥዕና ሳይንስን ኮሌጅ ፣ ናይ ሕብረተሰብ ሓለዋ ጥዕና ኢንስቲቱት፡ ስልኪ ቁፅሪ: +251-911-56-84-77, ኢ -ሜይል : pipizewa@gmail.com

ዋና ተመራማሪ ፡

3. ጎይቶም ሓለፍም (BSc) ስልኪ ቁፅሪ: +251-928-34-80-52, ኢ -ሜይል: aboabuye@gmail.com

1. ውዕሊ ስምምዕነት መምለኢ ፎርሚ

ሐታቲ፡ ሰላም ከመይ አለካ/ኪ? ሽመይ ---------- ይብሃል ብሞያይ----------
- እየ፡፡ አብዚ ሆስፒታል /ጥ/ጣብያ ናይ ኤች .አይ . ቪ.. ኤድስ ሕክምናን ክንክንን አገልግሎት ሰራሕተኛ እየ፡፡ሐዚ ንዓካ /ኪ ዝደለናሉ ምክንያት አብ ጎንደር ዩኒቨርሰቲ ናይ 2ይ ድግሪ ተምሃራይ ዝኾነ አይተ ጎይቶም ሐለፎም አብ ዞባ ደቡብ ትግራይ አብ ዘለዉ ትካላት ጥዕና ዘለዉ ናይ ፀረ-ኤች.አይ.ቪ ኤድስ መድሓኒት ተጠቀምቲ መጅመርያ ሕክምና ንርካብ ንምነታይ ዘንጊያም ናብ ሕክምና ከም ዝአትዉ ንዝግበር መዕናዕቲ ንክትሳተፍ እዩ፡፡ ንስካ ዝተመረፅካሉ ብዕጫ ኮይኑ እቲ መዕናዕቲ ዝደልዮ ረቑሓ ስለ እተማልእ እዩ፡፡ አብ መዕናዕቱ ምስታፍ አብ ፈቓደኝነት ዝተመርኮዘ እዩ፡፡ ምስታፍ ዘይምስታፍ ይከአል፣ቓለ መጠይቕ ምስተጀመረ ኮነ ቕድሚ ምጅማሩ ተዘይተሰማዕሚዕካ ምቁራዕ ይከአል እዩ፡፡አብ መዕናዕቱ ብምስታፍካ ንኣካ ምንም ዓይነት ጥቕሚ ወይ ከዓ ዕልዋ የብሉን ነገር ግን ነቲ መዕናዕቲ ዓለማ ብጣዕሚ ወሳኒ ግደ አለዎ፡፡ ካባካ ዝውሰድ መረዳእታ ምስጥሩ ዝተሓለወ አዩ፡፡ሽምካ አብዚ ወረቀት ስለ ዘይፅሓፍ ምሳካ ብምንም ምክንያት አይትሓሓዝን፡፡ አቲ መረዳእታ ነዚ መዕናዕቲ ምስ ወዓለ ሰብ አብ ዘየግንዮ ተቆሊፍ ይቕመጥ፡፡

ሐታቲ ፡	ስለዚ ንክትሳተፍ ፍቓደኛ ድኻ ?	
ተሳታፊ፡	1. እወ	2. አይኮንኩን
ሐታቲ፡	ብጣዕሚ የመስግን	ብጣዕሚ የመስግን ምካድ ትክእል እካ/ኪ
ተሳታፊ፡	ናይቲ መዕናዕቲ ዓላማን አብ አይ ምንም ዓይነት ጉድአት ዘይብሉ ምካኑን ብግልፂ ተረድአ ንምስታፍ ፍቓደኛ ምኻነይ የረጋግፅ ፊርማ----------	

2. መጠይቕ

ናይቲ ጥዕና ትካል ሽም ----------
ንተሓታቲ ዝውሃብ መፍለይ ቑፅሪ ----------

ሀ.	ናይ ተሳታፊ መዝገብ ብምርአይ ዝምላእ ፡ ካብ 101-103 ዘለዉ ሕቶታት ኣቲ ተሳታፊ መጀምርያ ናብ ኤች.ኣይ.ቪ. ኤድስ ክንክን ኣብ ዝመፅኡሉ ጊዜ ዘሎ መረዳእታ ጥራሕ ክምላእ ኣለዎ፡፡		
	ሕቶ	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
መ. ቑ	1ይ ክፋል፡ መጀመርያ ናብ ኤችኣይቪ ኤድስ ክንክን ኣብ ዝመፅእሉ ጊዜ ዝነበረ ናይቲ ሕማም ደረጃ ዝገልፅ መረዳእታ		CD4 ቁጽሪን ናይትካል ጥዕና ዓለም ደረጃን ዘይፍለጥ/ዘይተመዝገበ እንተኾይኑ እቲ ተሳታፊ ቃለ መጠይቕ ምግባር ኣየድላዩን
101	መጀመርያ ናብ ኤችኣይቪ ኤድስ ክንክንን ህክምናን ዝመፅኡሉ/ትሉ ዓመት	_____/_____/_____ ዓ.ም	
102	መጀመርያ ናብ ኤችኣይቪ ኤድስ ክንክን ኣብ ዝመፅእሉ ጊዜ ዝነበረ ቁፅሪ CD4	_____ዋህዮ/ሚሜ^3	
103	መጀመርያ ናብ ኤች.ኣይ.ቪ. ኤድስ ክንክን ኣብ ዝመፅኡሉ/ትሉ ጊዜ ብትካል ጥዕና ዓለም / WHO /ዝነበረ ናይቲ ሕማም ደረጃ	5. ደረጃ I 6. ደረጃ II 7. ደረጃ III 8. ደረጃ IV	
ለ.	ብቓለ መጠይ ቕ ዝምላእ፡ ኩሎም ሕቶታት ናይቲ ተሳተፊ ቅድሚ ናብ ኤች.ኣይ.ቪ. ኤድስ ክንክን ምምፃኡ ዝነበሮ ኩነታት ንምዕቃን ተደልዩ ዝተዳለዉ እዮም፡፡ስለዚ ኩሎም ሕቶታት ከምቲ ተዓሕፎምዎ ዘለዉ ወይ ከዓ ቕድሚ መጀመርያ ናብ ሕክምና ምምፃእካ.... ተባሂሉ ክሕተት ኣለዎ፡፡		
መ. ቑ	2ይ ክፋል : ማሕበራዊን ስነ-ህዝቢ.ዊን ኩነታት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
201	ፆታ	2. ተባ 2. ኣነ	
202	መጀመርያ ናብ ኤች.ኣይ.ቪ. ሕክምና ኣብ ዝመፃእካሉ /ክሉ ዕድመካ ክንደይ ነይሩ?	_____ ዓመት	
203	መጀመርያ ናብ ኤች.ኣይ.ቪ. ሕክምና ኣብ ዝመፃእካሉ ጊዜ ናይ ሓዳር ኩነታትኪ/ካ ከመይ ነይሩ ?	5. ዘይምርዕው 6. ዝተመርዓወ/ወት 7. ሰብኣያ /ሰበይቱ ዝሞታ/ተቶ 8. ዝፈትሐ/ዝፈትሐት 9. ካልኢ(ይገለፅ)	
204	መጀመርያ ንኤች.ኣይ.ቪ. ክንክን ኣብ እትመፅእሉ ጊዜ ፅንሲ ነይሪኪ ዶ ?	1. እወ 2. ኣይነበረንን	201 ኣነ
205	መጀመርያ ንኤች.ኣይ.ቪ. ክንክን ኣብ እትመፅእሉ/ኣሉ ጊዜ ደረጃ ትምህርቲ ?	5. ምንባብ/ ምፅሓፍ ዘይኽእል) 6. 1ይብርኪ.(1-8) 7. 2ይብርኪ. (9-12) 8. ካብ ዩኒቨርሰቲ/ኮሌጅ ንላዕሊ	
206	እትነብረሉ/ርሉ ቦታ	2. ከተማ 2. ገጠር	
207	ስራሕካ/ኪ እንታይ ነይሩ ?	10. ተምሃሪት/ራይ 11. ናይገዛ እመቤት/ብዓልቲ ቤት/ 12. ሰራሕተኛ መንግስቲ 13. ናይ ግሊ ትካል ሰራሕተኛ 14. ነጋዳይ 15. ሓረስታይ 16. መዓልታዊ ሰራሕተኛ 17. ሰራሕ ዘይብሉ 18. ብመውስቦ ንግዲ እትመሓደር/ፈይቶት/ 19. ካልኢ (ይገለፅ)----------	
መ. ቑ	3ይ ክፋል: ን ናይ ኤች.ኣይ. ቪ/ኤድስ ህክምና ዘለዎ ድልየት መዐቀኒ	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
301	ንመጀመርያ ጊዜ ኤች .ኣይ . ቪ. ቫይረስ ኣብ ደምካ ምህላዉ መዓዝ ተነጊርካ ወይ ከዓ ፈልጥካ ?	_____/____/_____ዓ.ም	
302	ንመጀመርያ ጊዜ ኤች .ኣይ . ቪ. ቫይረስ ኣብ ደምካ ምህላዉ ኣበይ ተነጊርካ ወይ ፈልጥካ?	1. ኣብዚ ጥዕና ትካል 2. ካልኢ(ይገለፅ)	
303	ንመጀመርያ ጊዜ ኤች .ኣይ . ቪ. ከም ዘለካ ኣብ ዝሰማዕካሉ ጊዜ ናይ ኤች .ኣይ . ቪ. ምርመራ ዝገበርካሉ/ክሉ ምክንያት እንታይ ነይሩ?	6. ብዓርሰ ድልየት ዝግበር ምርመራ 7. ብበዓል ሙያ ምልዕዓል ዝግበር ምርመራ 8. ካብ ኣዶ ናብ ዕሽል ምክልኻልፕሮግራም	

		9. ብዝነበረኒ ሓደገኛ ተጓንፎ 10. ምልክታት ብምርአይ 11. ካሊእ (ይገለፅ)----------	
304	ኤች.አይ. ኤድስ ብከመይ ሓልፊካ/ኪ?	1. ንዝሐመመ ዘመድ ክንክን አብ ምግባር 2. ብዖታዊ ርክብ 3. በላሕቲ ነገራት ብመጥቃም 4. ካሊእ (ይገለፅ)	
305	መጀመርያ ን ኤች.አይ.ኤድስ ሕክምና ክትመፅእ ከለካ ከምኒ ሕማም ሽኮርያ ፣ድፊኢት ደም ፣ናይ ልቢ ድኻም ወዘተ ነይርካ ድዩ ?	1. እወ 2. አይነበረንን	
306	ንመጀመርያ ጊዜ ናብ ኤች .አይ . ቪ ኤድስ ሕክምናን ክንክን ንክትመፅእ እንታይ አለዓልልካ/ኪ?	11. ውሉደይ፣ቤተሰበይን ዓርሰይን ንምክልኻል ክብል 12. ናይ ምክልኻል ዋህዮታተይ ንምፍልጥን አድላዩ አብ ዝኮነሉ ሕክምና ንምጅማርን 13. ቤተ ሰበይ፣ብዓልቲ ቤተይን ስለ ዘተባበዑኒ 14. ካሊእ መድሓኒት ብምጥቀም ስለ ዘይሓሸኒ 15. ብጣዕሚ ስለ ዝሐመምኩ 16. ዕኑዕ ሕማም /ሞት ብምፍራሕ 17. ሕክምና ብምወሳድ ዘሎ ዝሓሸ ህይወት ተስፋ ብምግባር 18. ናይ ኤች .አይ . ቪ ኤድስ ሕክምና ግድን ምካኑ ስለ ዝፈልጥ 19. አይፈልጦን 20. ካሊእ(ይገለፅ)	ካብ 1 ንላዕሊ መልሲ ይህአል እዩ።
307	ቐድሚ ናብ ኤች .አይ . ቪ ኤድስ ሕክምና ምምፃእካ ካሊእ ፈውሲ/መድሓኒት መኩርካ ነይርካ ዶ ?	2. እወ 2. አይሞኮርኩን	
308	ንቁዕሪ 307 እወ እንተኾይኑ እንታይ ዓይነት መድሓኒት?	6. ባሕላዊ ሕክምና/መድሓኒት 7. ካብ መድሓኒት መከፋፈልቲ ትካላት/ፋርማሲ 8. ሀይማኖታዊ 9. ኣብ ገዛ ዝተሰርሐ መድሓኒት 10. ካልእ (ይገለፅ)----------	ካብ 1 ንላዕሊ መልሲ ይህአል እዩ።
መ. ቑ	4ይ ክፋል: ፍልጠት ፀረ- ኤች.አይ. ቪኤድስ ህክምና ዝምልከት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
401	ቐድሚ መጀመርያ ናብ ክንክን ምምፃእካ ስለ ኤች .አይ . ቪ ኤድስ ህክምናን ክንክንን ሰምዕካ ዶ ትፍልጥ ?	1. እወ 2. አይፈልጥን	2 ናብ 5ይ ክፋል
403	ቐድሚ ናይ ኤች.አይ.ቪ ኤድስ ህክምና ምጅማርካ ካብ ዞም ሲዒቦም ዘለው አየናይ ትፈልጥ ነይርካ ?		
	ፀረ- ኤች .አይ. ቪ ኤድስ ሕክምና ብናፃ አብ ሆስፒታል ወይ ከዓ ጥ/ጣብያ ከምዝርከብ	1. እወ 2. አይፈልጥን	
	ፀረ ኤች .አይ . ቪ ኤድስ ሕክምና ብምውሳድ ምስ ኤች .አይ . ቪ ኤድስ ዘይብሉ ሰብ ተመሳሰሊ ዕድመ ምንባር ከምዝከኣል	1. እወ 2. አይፈልጥን	
	ፀረ- ኤች .አይ .ቪ ኤድስ ሕክምና ንዕድመ ልክዕ ዝውሰድ መድሓኒት ምኳኑ	1. እወ 2. አይፈልጥን	
	ፀረኤች .አይ. ቪ ኤድስ ሕክምና ብጣዕሚ ከይሐመምካ ከምዝጅመር	1. እወ 2. አይፈልጥን	
	ኤች .አይ . ቪ ኤድስ ዘለዋ አዶ ፀረ-ኤች .አይ . ቪ ኤድስ ሕክምና ምውሳድ ከምእትኽእል	1. እወ 2. አይፈልጥን	
	ፀረ ኤች .አይ. ቪ ኤድስ ሕክምና አብ ደም ዘሎ ናይ ቫይረስ መጠን ከምዝቐንስ	2. 1. እወ 2. አይፈልጥን	
መ. ቑ	5ይ ክፋል: ን ፀረኤች.አይ. ቪኤድስ ሕክምና ምጅማር ዕንቅፋት ዝኮኑ ነገራት	ነቲ ሕቶ ዘተውሃበ መልሲ	መብርሂ
501	ፀረኤች .አይ . ቪ ኤድስ ሕክምና ንክይትጅምር ዕንቅፋት /መሰናክል ዝኮኑካ ነገራት ነይሮም ዶ?	ነ. እወ 2. አይነበረነን	2 ናብ 503

502	ካብ ዞም ስዒቦም ዘለዉ አየነአም ምኽንያታት ዕነቅፋት ኮይኖምካ/ኪ	1. ፀረ ኤች .አይ . ቪ.ኤድስ ሕክምና ብዝፈልጦም ሰባት ሰለዝወሃብ 2. ንመንዓዝያ ዝከውን ገንዘብ ስለ ዝሓፅረኒ 3. ኤች .አይ .ቪ. ክሊኒክ አብ ዝምችው ሰዓትን መዓልቲን ስለዘይክፈት 4. ናይ ኤች .አይ . ቪ. ሕክምና ክወስድ ከለኩ ዝፈልጠኒ ስብ ከይርእየኒ ብምፍራሕ 5. አብ ሐዳረይ ዝፍጠር ጎንጺ/ህውከት ብምፍራሕ 6. አብ እቶተይ/ስራሐይ ዘጋጥመኒ ክስራን ብምፍራሕ 7. ናይ ፀረ ኤች .አይ .ቪ. ኤድስ መድሓኒት ጎድናዊ ሳዕቤን ብምፍራሕ 8. ኤች.አይ.ቪ. ከም ዘለኒ ንሰባት ምቅላዕ/ምግለፅ ስለ ዘፍርሓኒ 9. ካብ ሕብረተሰብ ዝመፅእ ምጽላም/ምግላል ብምፍራሕ 10. ገንዘብ ብበዓል ገዘይ ስለ ዝውነን 11. አገልግሎት አብ ምርካብ ዘሎ ነዊሕ ተራ ብምፍራሕ 12. ነዊሕ ርሕቀት ወይ ከዓ ነዊሕ ስዓት ምንዓዝ 13. ፀረ ኤች .አይ .ቪ. ኤድስ መድሓኒት አበይ ከም ዝርከብ ስለ ዘይፈልጥ 14. ካሊእ (ይጠቀስ)	ካብ ሐደ ንላዕ ሲ. መል ሲ. ምሃ ብ ይከአ ል እዩ።
503	ገዛካ/ኪ ካብቲ ዝቐረበ ኤች. አይ .ቪ. ሕክምና ዝወሃበሉ ትካል ብክንደይ ይርሕቕ	----------ኪሎ ሜትር፣ብእግሪ ጉዕዞ ዝወስዶ ሰዓት ---------- ሰዓት	PL
መ. ቁ	6ይ ክፋል : ባህርያዊ ኩነታት ዝምልከቱ ሕቶታት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
601	ቅድሚ ን ኤች. አይ.ቪ. ሕክምና ምምጻእካ አብ 1 ዓመት ውሽጢ መስተ ትሰቲ ዶ ነይርካ/ኪ?	2. እወ 2. አይሰትይን	2 ናብ 603 ሕለፍ
602	ን ቐፅሪ 501 እወ እንተኮይኑ አብ መዓልቲ ብ ማእኸላይ ክንደይ ትሰቲ ነይርካ/ኪ?	4. 1-2 መስተ አብ መዓልቲ 5. 3-4 መስተ አብ መዓልቲ 6. 5-6 መስተ አብ መዓልቲ	
603	አብ ህይወትካ/ኪ ክንደይ ፆታዊ (sexual partner) መሐዛ ነይረናካ/ ነይሮምኪ?	4. ምንም አይነበረንን 5. ሓደ 6. ክልተ 7. ካብ ክልተ ንላዕሊ	
604	አብ ህይወትካ ነፍሰን ሽይጠኛ ምስ ዝመሓደራ /ፋይቶት/ ጾታዊ ርክብ ፈፅምካ ትፈልጥ ደ ?	3. እወ 4. ኣይፈልጥን	ን201 ተባ ጥራሕ
መ. ቁ	7ይ ክፋል ፡ ኩነታት ማሕበራዊ ኸባቢ ዝምልከቱ ሕቶታት	ነቲ ሕቶ ዝተዉሃበ መልሲ	መብርሂ
701	መጀመርያ ናይ ኤች.አይ.ቪ. ኤድስ ክንክን እንትጅምር ከለካ/ኪ ምስ መን ትነብር ነይርካ/ኪ?	4. ንብሕቶ 5. ምስ ስድራ 6. ምስ ብዓል/ቲ ገዛይ 7. ካሊእ (ይገለፅ)_____	
702	መጀመርያ ን ኤች.አይ.ቪ. ክንክን ክትመፅእ ከለካ አብ ገዛ ካሊእ ምስ ኤች አይ ቪ ዝነብር ስብ ነይሩ ዶ ?	2. እወ 2.አይነበረን	
703	መጀመርያ ኤች.አይ.ቪ. ክንክን እንትጅምር ከለካ/ኪ ምሳካ ዝነብር ኤች.አይ.ቪ. ክንክን ዝጥቀም ሰብ ነይሩ ዶ ?	1. እወ 2. አይነበረን	
704	ናብ ክንክን አብ ዝመፃእካሉ ጊዜ ንስካ እተፅብዮም ትሕቲ 10 ዓመት ቆልዑት ነይሮም ዶ ?	1. እወ 2. አይነበሩን	
705	ን መጀመርያ ጊዜ ናብ ኤች .አይ . ቪ.ኤድስ ሕክምናን	ነ. እወ 2. አይገለጽኩን	

	ክንክንን ክትመዕእ ከለኻ ኤች .አይ . ቪ. ከም ዘለካ ንካሊእ አካል ዓርስካ አቃሊዕካ/ገሊዕካ ነይርካ ዶ ?		
706	ንቁዕሪ 705 እወ እነተኮይኑ ንመነመን ዓርስካ ገልዕካ ነይርካ ?	5. ብዓል /ቲ ገዛይ 6. ስድራ ቤት 7. ጎረቤት 8. ን ናይ ሀይማኖት ተገዳሲ/ክንክን ወሃቢ 9. ካልእ(ይጠቀስ))_____	
707	ንመጀመርያ ኤች.አይ.ቪ. ኤድስ ከም ዘለካ ምሰ ፈለጥካ ዓርስካ ንምርግጋዕ ዝወሰድካዮ ስጉምቲ እንታይ ነይሩ ?	5. ንበዓል ገዛይ፣ንስድራይ፣ንሀይማኖት ተገዳሲ ምምኻር 6. ሰብ ሙያ ባህላዊ መድሓኒት ምምኻር 7. ናይ አመጋግባን ካለእ አገባብ መነባብሮን ለውጢ ምግባር 8. ሰብ ከይፈልጠለይ ብምስጢር ምሕላው 9. ካሊእ (ይገለፅ)	
መ. ቁ	ናይ ማሕበራዊ ድጋፍ ደረጃ መለከዒ	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
708	ድጋፍ ዝህበካ አካል እንተደሊካ ክንደየናይ ዝአክል እዞም ዝስዕቡ ዝገብረልካ ሐደ ሰብ /ገለ ሰብ ትረክብ ?	(ምንም አይረክብን ፣ሓደሓደ ጊዜ፣ ብዙሕ ጊዜ ፣ ዳረጋ ኩሉ ጊዜ፣ ኩሉ ጊዜ)	
	ካብ ዓራት ምልዓል እንተዘይክእልካ ዝረድኦካ/ዘልዕለካ	2. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ሕክምና አብ ዝደለካሉ ጊዜ ናብ ሕክምና ዝወስደካ	1. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ምግቢካ ምስራሕ አብ ዝሰአንካሉ ምግቢ ዘዘጋድጆየልካ	1. ምኣ2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	እንድሕር ሓሚምካ ዕለታዊ ዝኮኑ ቀለለልቲ ሰራሕቲካ ዝሕግዘካ	1. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ዕቡኞ ጊዜ ምስኡ ሓቢርካ ክተሕልፍ እትከእል	1. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ስለ ዓርሰ ሽግርካ ምኽሪ ንከማኽረካ እትተአማመኖ	1. ምኣ2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ሽግርካ ብቅልጡፍ ዝርደአልካ	1. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
	ዝቐርበካን ተፈታዊነትካ ወይ ከዓ ፍኞሩ ዝገልፀልካን	1. ምኣ 2. ሓጊ 3. ብጊ 4. ዳኩጊ 5. ኩጊ	
መ. ቁ	ናይ ተስፋ ምቕባዕ ደረጃ ስምዒት መዐቀኒ	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
709	ኤች . አይ . ቪ. ከም ዘለካ ካበ ፈለጥካ		
	አብ ህይወትካ ድሱት ድካ ?	2. እወ 2. አይኮንኩን	
	ሐደ ሐደ ጊዜ ህይወተይ ባዶ እዩ ዝብል ስምዕት ይስምዓካ ዶ ?	2. እወ 2. አይስመዓንን	
	ሓደ ዕቡኞ ዘይኮነ ነገር ከይበጽኒ ኢልካ/ኪ ተጨንካ ዶ ትፈልጥ?	2. እወ 2.አይፈልጥን	
	መብዛሕቲኡ ጊዜ ደስታ ይስመዓካ ዶ ?	1. እወ 2. አይስመዓንን	
መ. ቁ	ዓርስካ ኣዋረድካ/ኣኽፍአ ናይ ምርአይ ስምዕት መዐቀኒ	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
710	ካብዞም ዝስዕቡ አየናይ ስምዒት ይስመዓካ ?		
	ኤች.አይ.ቪ. ከም ዘለኒ ንሰባት ምንጋር ብጣዕሚ ይከብደኒ	2. እወ 2. አይከብደንን	
	ኤች.አይ.ቪ ቫይረስ አብ ደመይ ስለዘለኒ ንፁህ ከም ዘይኮንኩ ይስመዓኒ	2. እወ 2. አይስመዓንን	
	ኤች.አይ.ቪ.ቫይረስ አብ ደመይ ስለ ዘለኒ በደለኛ ከም ዝኮንኩ ይስመዓኒ	2. እወ 2. አይስመዓንን	
	ኤች.አይ.ቪ. ቫይረስ አብ ደመይ ምህላዉ ብጣዕሚ የሕፍረኒ	2. እወ 2. አየሕፍረንን	
	ኤች.አይ.ቪ. ቫይረስ አብ ደመይ ስለ ዘለኒ ሓደ ሓደ ጊዜ ዋጋ ዘይብለይ መሲሉ ይስመዓኒ	2. እወ 2. አይስመዓንን	
	ኤች.አይ.ቪ.ቫይረስ አብ ደመይ ምህላዉ ካልኦት ከይፈልጡ ይሓብኡ እየ።	2. እወ 2. አይሓብኦን	
መ. ቁ	8ይ ክፋል፡ አብ ሕብረሰብ ደረጃ ዝፍጠሩ ምኽንያታት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
801	አብ ከባቢኩም ብ ኤች.አይ.ቪ ዙርያ ዝንቀሳቀሱ ድጋፍ ወሃብቲ ጉጅለታት ነይሮም ዶ ?	2. እወ 2. አይነበሩን	

802	ን ቁጽሪ 701 መልሶም አወ አንተኸይኑ እንታይ ዓይነት ድጋፍ ውሃብቲ ጉጅለ እዮም?	4. ናይ ሕብረተሰብ ድጋፍ ውሃብቲ ጉጅለ 5. ሃይማኖታዊ ድጋፍ ውሃብቲ ጉጅለ 6. ምስ ኤች ቪ ዝነብሩ ድጋፍ ውሃበቲ ጉጅለ 3. ካሊእ (ይገለፅ)	
መ. ቁ	ካብ ሕብረተሰብ ንዝውሃብ ምፅላም ምስክርነት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
803	ኤች.አይ.ቪ ስለ ዘለዎ/ዋ ካብዞም ሰዒቦም ዘለዉ ኣድልዎታት ዝበፅሑ ሰብ አብ ከባቢካ አጋጥምካ/ኪ ዶ ይፈልጥ ?		
	ካብ ስራሑ ዝተባረረ፣ደንበኛኡ ዝስአነ/ ወይ ዝከሰረ	1. እወ 2. አይፈልጥን	
	ዓርኩ/ካ ዝኻሕደቶ/ዳ ወይ ካዓ ዝገደፋ/ፈቶ	1. እወ 2. አይፈልጥን	
	ሰብ ዝሓጨጮ	1. እወ 2. አይፈልጥን	
	አካላዊ በደል ዝበፅሑ	1. እወ 2. አይፈልጥን	
	አብ ሕብረተሰቡ ወይ ከዓ ስድራኡ ዝነበሮ ክብሪ ዝሰአነ	1. እወ 2. አይፈልጥን	
መ. ቁ	9ይ ክፋል፡ ናይ ቤተሰብ ሃብቲ መጠን መለከዒ ሕቶታት	ነቲ ሕቶ ዝተውሃበ መልሲ	መብርሂ
901	C. ን ከተማ ነበርቲ		206 ከተማ
	ናይ ውልቀ መንበሪ ገዛ	2. አለኒ 2. የብለይን	
	ኤሌክተርክ	2. አለኒ 2. የብለይን	
	ሬድዮ	2. አለኒ 2. የብለይን	
	ቴሌ ቪዥቦን	2. አለኒ 2. የብለይን	
	ሞባይል ስልኪ	2. አለኒ 2. የብለይን	
	ናይ ገዛ ስልኪ	2. አለኒ 2. የብለይን	
	ፍሪጅ	1. አለኒ 2. የብለይን	
	ጠረጴዛ	1. አለኒ 2. የብለይን	
	ወንበር	1. አለኒ 2. የብለይን	
	ፍራሽ(ስፖንጅ፣ጡጥ ፣ጨርቃ ጨርቂ) ዘለዎ ዓራት	1. አለኒ 2. የብለይን	
	ናይ ኤሌክተሪክ /ዕንጨት ቆጣቢ/ ምድጃ	1. አለኒ 2. የብለይን	
	ናይ ቤተ ሰብ ወርሓዊ አታዊ ብማእኸላይ	_____ ብር	
902	D. ን ገጠር ነበርቲ	ነቲ ሕቶ ዘተውሃበ መልሲ	ን 206 ገጠር
	ናይ ውልቀ ገዛ	1. አለኒ 2. የብለይን	
	ሬድዮ	1. አለኒ 2. የብለይን	
	ሞባይል ስልኪ	1. አለኒ 2. የብለይን	
	ፍራሽ (ስፖንጅ፣ጡጥ ፣ጨርቃ ጨርቂ) ዘለዎ ዓራት	1. አለኒ 2. የብለይን	
	ኩራዝ / ፋኑስ	1. አለኒ 2. የብለይን	
	ዓመታዊ ናይ ሕርሻ አታዊ ብኩንታል	_____ኩንታል	
	ብቤተሰብ ደረጃ ክንደይ ዝሕረስ መሬት ይውነን	_____ብ ጽማድ	
	ብቤተሰብ ደረጃ ክንደይ እንስሳ ዘቤት አለኩም?		
	አላሕም፣ኣቡዑር፣	_____ብ ቑፅሪ	
	ፈረስ, አድጊ, በቕሊ	_____ ብ ቑፅሪ	
	ኣጣሊ	_____ ብ ቑፅሪ	
	በጊዕ	_____ ብ ቑፅሪ	
	ደርሁ	_____ ብ ቑፅሪ	

FGD Guide: Tigrigna Version

1. ሰባት ናብ ኤች . አይ . ቪ ሕክምና ቀልጢፎም ዘይመፅእሉ /ብጣዕሚ ምስ ሓመሙ ዝመፅእሉ ምክንያት አንታይ እዩ ?
2. ተጠቀምቲ ካብ ኤች.አይ.ቪ ኤድስ ሕክምና ወፃኢ ካሊእ መድሓኒት ዝጥቀሞ ነግር እንታይ አሎ ?
3. አብ ከይዲ ምርካብ ናይ ኤች .አይ.ቪ ኤድስ ሕክምና መብዛሕቲኦም ሰባት ዝድንጉዩሉ ደረጃ አብ ምንታይ እዩ ?

   ሀ. ምርመራ አብ ምግባር / ዓርሰካ አብ ምፍላጥ ድዩ ? ወይስ

   ለ. ዓርሰካ ምስ ፈለጥካ ሕክምና አብ ምጅማር እዩ ?
4. አብ ምንታይ ዕድመ ደረጃ ዘለው እዮም ዘንግኡም ዝመፁ ;

ደቂ ተባዕትዮ ድዮም ወይስ ደቂ አንስትዮ እዮም ብብዝሓት ዘንግፆም ዝመፁ

ሐዳር ዘለዎም ድዮም ወይስ ዘይብሎም እዮም ?

5. አብ ሕብረተሰብ ደረጃ ሰባት ናብ ኤች አይ ቪ ሕክምና ንከይመፅእ ዝገብሩዎ ነገራት አንታይ እንታይ እዮም ? ንክጥቀም ዘየበራትዑን ንክጥቀም ዘበራትዑን
6. ናይ ኤች አይ ቪ ሕክምና አብ ምጥቃም ሰባት ዝሐስብዎም ዕንቅፋታት አንታይ እንታይ እዮም ?
7. ሰባት ዘንጊዖም ንከይመፁ እንታይ ምግባር ይከአል ?

Annex VI: Declaration

I, the undersigned, senior MSc student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of master of public health in epidemiology and biostatistics

Name: Goitom Halefom Senbete (BSc)

Signature: _____

Place of submission: Institute of public Health, College of Medicine and Health Sciences, University of Gondar.

Date of Submission: _____

This thesis work has been submitted for examination with My/our approval as university advisor(s).

Advisor(s):

Name	Signature
1. Mr. Akilew Awoke (BSc, MPH)	_____
2. Mr. Yalemzewod Assefa (BSc, MPH)	_____